

A1-F18AC-630-500

1 SEPTEMBER 1992

Change 2 - 1 July 1997

TECHNICAL MANUAL

**ORGANIZATIONAL MAINTENANCE
SYSTEM SCHEMATICS**

**DATA LINK, INSTRUMENT LANDING, AND
RADAR BEACON SYSTEMS**

**NAVY MODEL
F/A-18A AND F/A-18B
161353 AND UP**

This manual is incomplete without A1-F18AC-630-510/(C)

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0801LP0062381

NATEC ELECTRONIC MANUAL

A1-F18AC-630-500

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NUMERICAL INDEX OF EFFECTIVE WORK PACKAGES/PAGES

List of Current Changes

Original 0 1 Sep 92

Change 2 1 July 97

Change 1 1 Jan 96

Only those work packages/pages assigned to the manual are listed in this index. Insert Change 2, dated 1 July 1997. Dispose of superseded work packages/pages. Superseded classified work packages/pages shall be destroyed in accordance with applicable security regulations. If changed pages are issued to a work package, insert the changed pages in the applicable work package. The portion of text affected in a change or revision is indicated by change bars or the change symbol "R" in the outer margin of each column of text. Changes to illustrations are indicated by pointing hands, change bars, or MAJOR CHANGE symbols. Changes to diagrams may be indicated by shaded borders.

Total number of pages in this manual is 56, consisting of the following:

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TPDR-2 blank	2	002 00		2 - 8	0	006 00	
001 00		1 - 6	2	9	2	1 - 8	0
1	0	003 00		10 - 11	0		
2 blank	0	1 - 9	0	12 Blank	0		

LIST OF TECHNICAL PUBLICATION DEFICIENCY REPORTS INCORPORATED

ORGANIZATIONAL MAINTENANCE

SYSTEM SCHEMATICS

DATA LINK, INSTRUMENT LANDING, AND RADAR BEACON SYSTEMS

This WP supersedes TPDR WP, dated 1 September 1992

1. The TPDRs listed below have been incorporated in this issue.

IDENTIFICATION NUMBER/ QA SEQUENCE NUMBER	LOCATION
NAS Cecil Field N09679-96-0053	WP004 00, Pg. 9
NAWC N39783-96-0123	Page A

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ORGANIZATIONAL MAINTENANCE

SYSTEM SCHEMATICS

DATA LINK, INSTRUMENT LANDING, AND RADAR BEACON SYSTEMS

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ORGANIZATIONAL MAINTENANCE

SYSTEM SCHEMATICS

DATA LINK, INSTRUMENT LANDING, AND RADAR BEACON SYSTEMS

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003 00	Locator - Instrument Landing System
004 00	Functional Schematic - Instrument Landing System
005 00	Locator - Radar Beacon System
006 00	Functional Schematic - Radar Beacon System

INTRODUCTION

ORGANIZATIONAL MAINTENANCE

SYSTEM SCHEMATICS

DATA LINK, INSTRUMENT LANDING, AND RADAR BEACON SYSTEMS

This WP supersedes WP002 00, dated 1 January 1996.

1. PURPOSE.

2. This manual has system schematics to give information about the system and allow signal tracing through the system. The system schematics support on-aircraft maintenance of mechanical, pneumatic, electrical, and electronic functions. These functions are integrated on the schematics for ease of troubleshooting a complete system.

3. REQUISITIONING AND DISTRIBUTION OF NAVAIR TECHNICAL PUBLICATIONS.

4. Procedures to be used by Naval Activities and other Department of Defense organizations requiring NAVAIR technical publications are defined in the NAVAL AIR SYSTEMS COMMAND TECHNICAL MANUAL PROGRAM manual, NAVAIR 00-25-100 and NAVAIRINST 5605.5. Distribution of aeronautical technical publications. To automatically receive future changes and revisions to NAVAIR technical manuals, an activity must be established on the Automatic Distribution Requirements List (ADRL) maintained by the Naval Air Technical Services Facility (NAVAIRTECHSERVAC). To become established on the ADRL, notify your activity central technical publications librarian. If your activity does not have a library, you may establish your automatic distribution requirements by contacting the Com-

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If additional or replacement copies of this manual are required with no attendant changes in the ADRL, they may be ordered by submitting requisitions to the Commander, Naval Inventory Control Point, Attn: Code 03334, 700 Robbins Avenue, Philadelphia, PA 19111-5098.

5. CONTENT.

6. Each system is supported by schematics and a component locator.

7. **COMPONENT LOCATOR.** The component locator shows aircraft location, nomenclature and reference designation number of each system component. The illustration shows the technicians view when possible.

8. **SCHEMATICS.** Simplified schematics, and detailed schematics provide direct support for testing and troubleshooting. All schematics are shown with electrical power off, switches

in off position, and relays in deenergized position unless noted on schematic.

9. Simplified Schematics. Simplified schematics consist primarily of blocks connected by single lines with limited use of symbols and pictorial drawings of units. These schematics simplify system functions as much as possible.

10. Detailed Schematics. Detailed schematics integrate applicable electrical, pneumatic and mechanical functions of the system. Detailed schematics show component location, connector pin letters and numbers, in line connectors, test points, and enough data to trace signals through the components within the system. Operational information next to components provides more data as required.

11. SCHEMATIC HIGHLIGHTS.

12. For schematic highlights see figure 1.

13. MANUAL ISSUE DATE.

14. The date on the title page is the copy freeze date. No additions, deletions, or changes are made after the manual issue date except last minute safety of flight or required maintenance changes. Data collected after the manual issue date will be included in later changes or revisions of the manual.

15. EFFECTIVITIES.

16. Effectivity notes on manual title pages, work package title pages, and within a work package indicate the aircraft or software program to which the data applies. If no effectivity note appears on the work package title page, the work package has the same effectivity as shown on the manual title page. The effectivity notes may use:

NOTE

Aircraft with model designator F/A-18B are the same type and model as TF/A-18A.

a. Type, model, and series

b. Bureau number (tail number)

c. Combination of type, model, series, and bureau numbers

d. Part number or serial number

e. Technical directive number

f. Configuration/identification number

17. The table below shows examples of effectivity notes and their meanings:

Effectivity Note Examples

Effectivity Note	Definition
160777 AND UP	Applicable to all F/A-18A, F/A-18B, F/A-18C and F/A-18D for bureau numbers listed.
F/A-18A, F/A-18B	Applicable to all F/A-18A and F/A-18B.
F/A-18C, F/A-18D	Applicable to all F/A-18C and F/A-18D.
F/A-18A	Applicable to all F/A-18A, but not F/A-18B, F/A-18C and F/A-18D.

Effectivity Note Examples (Continued)

Effectivity Note	Definition
F/A-18B	Applicable to all F/A-18B, but not F/A-18A, F/A-18C, and F/A-18D.
F/A-18C	Applicable to all F/A-18C, but not F/A-18A, F/A-18B, and F/A-18D.
F/A-18D	Applicable to all F/A-18D, but not F/A-18A, F/A-18B, and F/A-18C.
F/A-18A, F/A-18C	Applicable to all F/A-18A and F/A-18C, but not to F/A-18B and F/A-18D.
F/A-18B, F/A-18D	Applicable to all F/A-18B and F/A-18D, but not to F/A-18A and F/A-18C.
F/A-18A 160775, 160777 THRU 160782	Only applicable to some bureau numbers of F/A-18A. Not applicable to any F/A-18B, even if a F/A-18B bureau number is within the numbers listed.
F/A-18C 163427, 163430 THRU 163456	Only applicable to some bureau numbers of F/A-18C. Not applicable to any F/A-18D, even if a F/A-18D bureau number is within the numbers listed.
F/A-18B 160784 AND UP	Only applicable to some bureau numbers of F/A-18B. Not applicable to any F/A-18A, even if an F/A-18A bureau number is within the numbers listed.
F/A-18D 1633434 THRU 163457	Only applicable to some bureau numbers of F/A-18D. Not applicable to any F/A-18C, even if a F/A-18C bureau number is within the numbers listed.
160775 THRU 160785 BEFORE F/A-18 AFC 772	Applicable to F/A-18A and F/A-18B for bureau numbers listed, before modification by technical directive.
161213 AND UP; ALSO 160775 THRU 160785 AFTER F/A-18 AFC 772	Applicable to aircraft modified during production; also applicable when affected aircraft have been modified by technical directive.
160775 THRU 160785; WHEN No. 2 CONTROL PANEL P/N XXXX-X IS INSTALLED	Applicable to F/A-18A and F/A-18B for bureau numbers listed if panel P/N XXXX-X is installed. (Configuration before AVC).
161213 AND UP; ALSO 160775 THRU 160785; WHEN No. 2 CONTROL PANEL P/N XXXX-Y (AVC-102) IS INSTALLED	Applicable to aircraft modified during production; also applicable to aircraft components modified to the production configuration by technical directive. (Configuration after AVC).
P/N MBEU65101-9, MBEU65101-10 & MBEU65105-3	Applicable to assemblies which are interchangeable between aircraft.

Effectivity Note Examples (Continued)

Effectivity Note	Definition
ENGINE NO. 215101 THRU 215109	Applicable to assemblies which are interchangeable between aircraft, but configurations can not be identified by part number.
CONFIG/IDENT NUMBER 84A	The CONFIG/IDENT Number is the program load identification number which identifies the software program loaded in specific programmable units. Refer to A1-F18AC-SCM-000 for CONFIG/IDENT Number tables.

18. TECHNICAL DIRECTIVES.

19. Technical directives are documents which direct the accomplishment, and recording of a retrofit configuration or inspection to delivered aircraft, or aircraft components.

20. AIRFRAME; CHANGE (AFC) AND AIRBORNE TACTICAL SOFTWARE CHANGE (ASC). Technical directives which change configuration of aircraft structure or equipment installation, i.e. AFC, will list aircraft bureau numbers in effectivity notes and show before and after the AFC. Technical directives which change configuration of operational flight programs (OFP), i.e. ASC, will list the OFP CONFIG/IDENT NUMBER in effectivity notes and show the latest two authorized OFP programs. See AFC and ASC effectivity examples in Effectivity Note Example Table.

21. AIRCRAFT COMPONENT CHANGES. Technical directives which change configuration of aircraft components, i.e. AAC, ACC, AVC, AYC, and PPC will list part numbers in the effectivities. See AVC effectivity examples in Effectivity Note Example table.

22. HISTORICAL RECORD/RECORD OF APPLICABLE TECHNICAL DIRECTIVES.

23. The technical directives affecting this manual are listed in the Record of Applicable Technical Directives of each affected work package. Because an ASC directs all aircraft be modified within 30 days, ASC's are not listed. When all affected aircraft are modified, the before configuration is removed from the manual, and the technical directive entry is removed from the Record of Applicable Technical Directives and entered in the Historical Record of Applicable Technical Records.

24. TECHNICAL PUBLICATIONS DEFICIENCY REPORT (TPDR).

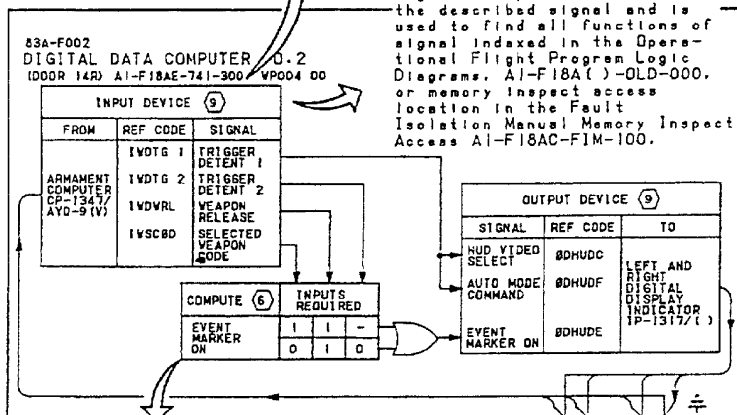
25. The TPDR (OPNAV FORM 4790/66) is the form for reporting errors and suspected omissions in the technical manuals. Reporting procedures are in OPNAVINST 4790.2 SERIES.

26. NAVY (AN) STANDARD/COMMON NAME NOMENCLATURE.

27. When an item has both Navy (AN) standard and common name nomenclature assigned, the common name nomenclature will be used in text and on illustrations. Full Navy (AN) standard nomenclature will be used in the Illustrated Parts Breakdown (IPB).

A1-F18AC-741-300. WP004 00 is a reference to manual which contains component maintenance procedures. When no reference appears, the system maintenance for the component is contained in the -300 series system manual being covered in this system schematic manual.

INPUT OR OUTPUT DEVICE describes the signal, tells where signal comes from or to what component signal is sent. The REF CODE is the digital computer mnemonic of the described signal and is used to find all functions of signal indexed in the Operational Flight Program Logic Diagrams, A1-F18A()-OLD-000. or memory inspect access location in the Fault Isolation Manual Memory Inspect Access A1-F18AC-F1M-100.



COMPUTER MATRIX shows the computer operational flight program in a truth table form. A hexagon symbol is placed in the computer matrix and is a reference to the LEGEND for an explanation of matrix.

83P-F002D is the reference designator for an electrical disconnect. The reference designator is used as the entry point into the Wiring Diagram Manual. A1-F18A()-WDM-000 or Wiring Repair Manual. A1-F18AC-WRM-000. It may also be used to get the part number of the item by cross referencing in the Ref Des Section of the Parts List Index. A1-F18AC-IPB-450.

HEXAGON SYMBOL contains a number. This symbol and number are used to reference the notes contained in the LEGEND.

SQUARE SYMBOL contains a number that refers to a sheet of the schematic where the circuitry is continued.

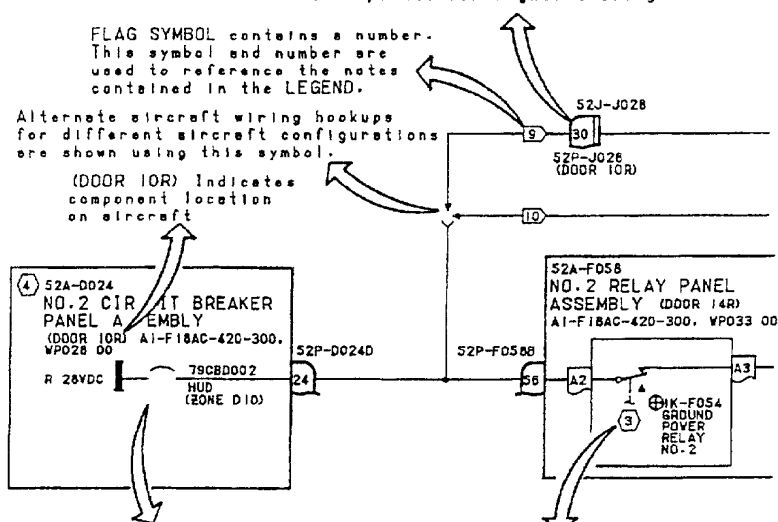
Figure 1. Schematic Highlights (Sheet 1)

Aircraft electrical disconnects are shown on schematics. The disconnect reference designator and aircraft location are shown on schematic. These disconnects may be used as test points for signal tracing.

FLAG SYMBOL contains a number.
This symbol and number are
used to reference the notes
contained in the LEGEND.

Alternate aircraft wiring hookups for different aircraft configurations are shown using this symbol.

(DOOR IOR) Indicates component location on aircraft



Information pertinent to circuit breaker is shown on schematics as listed below:

- R 28YDC is the aircraft bus which supplies voltage to circuit breaker.
- 79CBDO02 is the reference designator of circuit breaker and is located next to breaker on rear of panel.
- HUD is the name of circuit breaker and is located next to breaker on front of panel.
- (ZONE D10) is the location of circuit breaker on the circuit breaker panel. The letter D is the vertical location and number 10 is the horizontal location.

- 79CBDO02 is the reference designator of circuit breaker and is located next to breaker on rear of panel.

- HUD is the name of circuit breaker and is located next to breaker on front of panel.

- (ZONE D10) is the location of circuit breaker on the circuit breaker panel. The letter D is the vertical location and number 10 is the horizontal location.

DEENERGIZED WHEN GROUND POWER
2 SWITCH IS IN B ON. EXTERNAL
ELECTRICAL POWER IS NOT
APPLIED. DR APU IS NOT IN
GROUND MAINTENANCE MODE.

Operation highlights give pertinent information about the operation of the circuit, for ease of signal tracing.

Figure 1. Schematic Highlights (Sheet 2)

The legend contains all notes pertinent to the schematic as listed below:

- NUMBER listed with no symbol is general information about the schematic.
- NONSTANDARD SYMBOLS appearing on schematic are shown or referenced with an explanation.
- ABBREVIATIONS appearing on schematic are shown or referenced with an explanation.
- HEXAGON SYMBOL refers to another schematic or manual for continuation of a circuit or an explanation of data contained on schematic.
- FLAG SYMBOL indicates limited aircraft application.



LEGEND

1. CONTINUITY TESTS:

- A. ALL AIRCRAFT WIRE NUMBERS, SPLICE POINTS, AND GROUND POINTS ARE SHOWN IN A1-F18A() -VDM-000.
- B. WHEN A LOW LEVEL CURRENT SWITCHING RELAY (IDENTIFIED BY ⊕) IS REMOVED FOR TROUBLESHOOTING, IDENTIFY RELAY AND SOCKET FOR CORRECT REINSTALLATION. DO NOT REPLACE LOW LEVEL CURRENT SWITCHING RELAY WITH ANY OTHER USED RELAY. IF RELAY IS DEFECTIVE REPLACE WITH NEW RELAY.
- C. DO NOT TEST LOW LEVEL DEVICES (SWITCHES/RELAY CONTACTS) FOR CONTINUITY WITH MULTIMETER ON RX SCALE. PIN TO PIN TESTS THAT DO NOT GO THROUGH SWITCHES/RELAY CONTACTS MAY USE THE RX1 SCALE.
- D. WHEN TESTING CONTINUITY, TEST FOR:
 - (1) SHORTS TO GROUND.
 - (2) SHORTS BETWEEN SURROUNDING PINS ON CONNECTORS.
 - (3) SHORTS BETWEEN SHIELD AND CONDUCTORS.
 - (4) SHIELD CONTINUITY.

2. NONSTANDARD SYMBOLS:

- ⊕ IDENTIFIES RELAY USED TO SWITCH TO LOW LEVEL CURRENT. SEE NOTE 1.

- ③ GROUND POWER SWITCHING SCHEMATIC. A1-F18AC-420-500. WP005 00.
- ④ POWER DISTRIBUTION SCHEMATIC. A1-F18AC-420-500. WP004 00.
- ⑤ EXPLANATION OF MATRIX:
 - A. COMPUTE COLUMN LISTS THE SIGNAL OUTPUT.
 - B. INPUTS REQUIRED ARE USED TO DEVELOP THE SIGNAL OUTPUT.
 - C. THE SIGNAL OUTPUT IS READ HORIZONTALLY. EACH HORIZONTAL LINE IS AN INDEPENDENT SIGNAL OUTPUT.
 - D. INTERPRET MATRIX TABLE AS INDICATED:
 - (1) ONE (1) INDICATES THIS INPUT AS NAMED MUST BE THERE TO GET THE OUTPUT.
 - (2) ZERO (0) INDICATES THE INPUT AS NAMED MUST NOT BE THERE TO GET THE OUTPUT.
 - (3) DASH (-) INDICATES THE OUTPUT DOES NOT DEPEND ON THIS INPUT.
- ⑥ AVIONIC MUX CHANNEL 1 SCHEMATIC. A1-F18AC-741-500. WP003 00.
- ⑦ AVIONIC MUX CHANNEL 2 SCHEMATIC. A1-F18AC-741-500. WP003 00.
- ⑧ FOR LOGIC DIAGRAMS RELATING TO REF CODE, REFER TO A1-F18AC-OLD-000. FOR MEMORY INSTANT ACCESS LOCATION RELATING TO REF CODE, REFER TO A1-F18AC-FIM-100.
- ⑨ F/A-18A.
- ⑩ F/A-18B.

Figure 1. Schematic Highlights (Sheet 3)

ORGANIZATIONAL MAINTENANCE

SYSTEM SCHEMATICS

LOCATOR

INSTRUMENT LANDING SYSTEM

Reference Material

None

Alphabetical Index

Subject

Page No.

Installment Landing System Locator, Figure 1 2

Record of Applicable Technical Directives

None

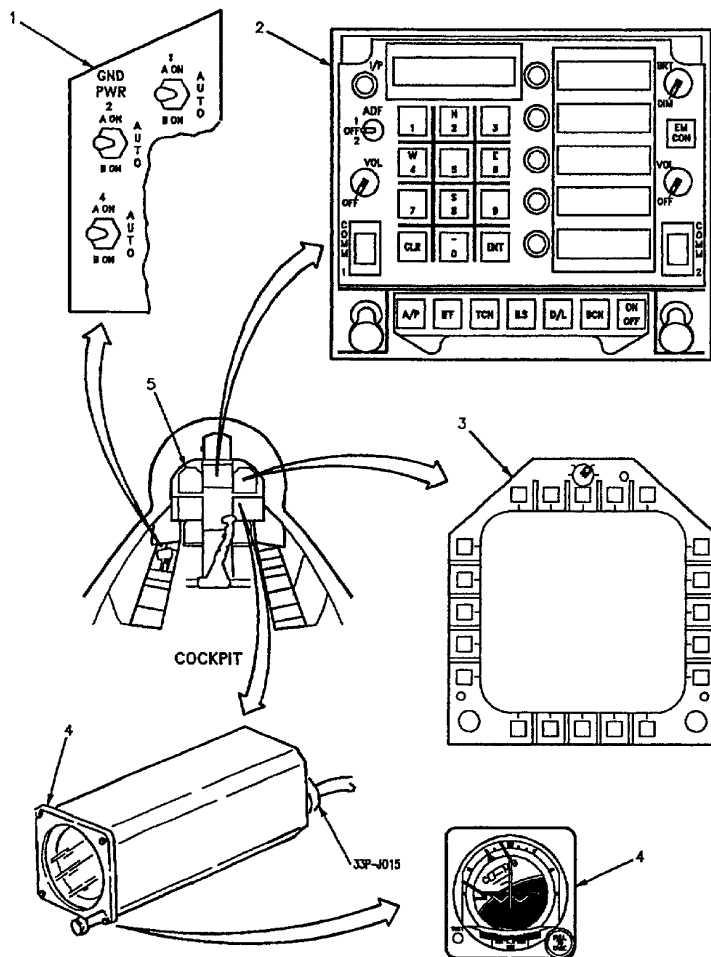


Figure 1. Instrument Landing System Component Locator (Sheet 1)

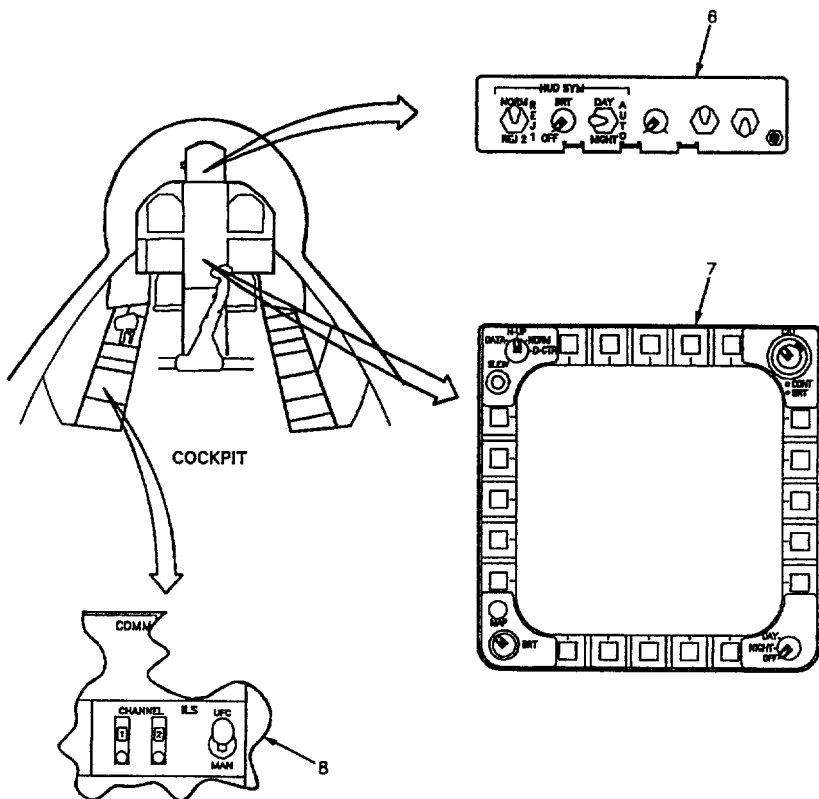


Figure 1. Instrument Landing System Component Locator (Sheet 2)

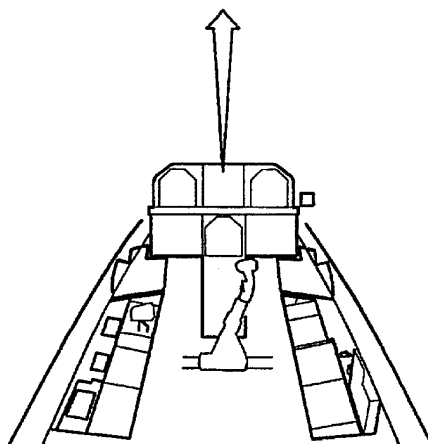
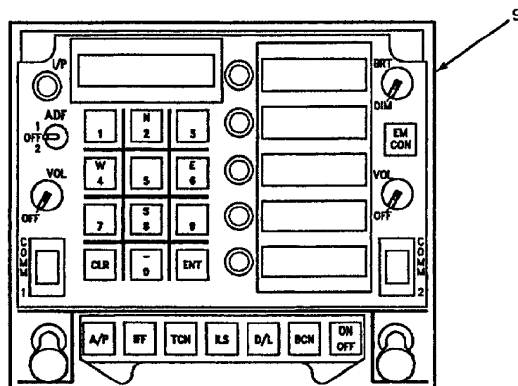
**REAR COCKPIT**

Figure 1. Instrument Landing System Component Locator (Sheet 3)

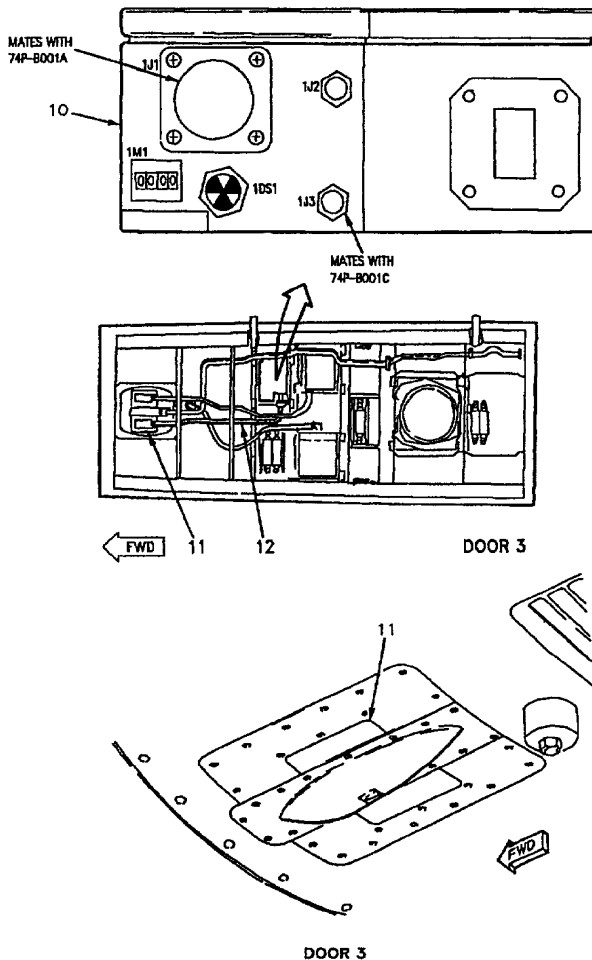
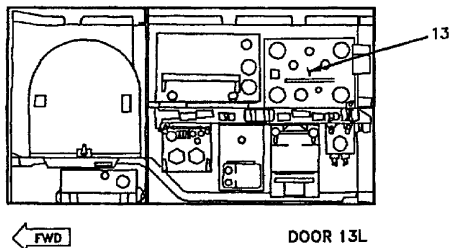
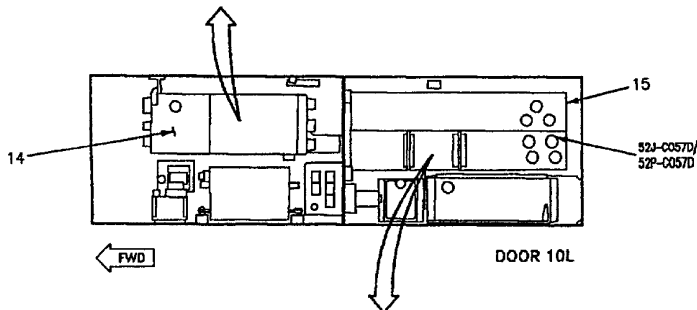


Figure 1. Instrument Landing System Component Locator (Sheet 4)



52A-C159 NO. 8 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY			
ZONE	REF DES	NOMENCLATURE	PURPOSE
D2	85C8C004	MSDKS	MAINT 24/28VDC
D12	80C8C006	MMD	L 115VAC ØC
E12	80C8C005	MMD	L 115VAC ØB
F12	80C8C004	MMD	L 115VAC ØA



52A-C057 NO. 7 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY			
ZONE	REF DES	NOMENCLATURE	PURPOSE
A7	74C8C008	LS	L 28VDC
A15	74C8C003	LS	L 115VAC ØA
A20	63C8C006	MISSION COMP NO. 1	L 115VAC ØA
B15	74C8C004	LS	L 115VAC ØB
B20	63C8C007	MISSION COMP NO. 1	L 115VAC ØB
C15	74C8C005	LS	L 115VAC ØC
C20	63C8C008	MISSION COMP NO. 1	L 115VAC ØC

Figure 1. Instrument Landing System Component Locator (Sheet 5)

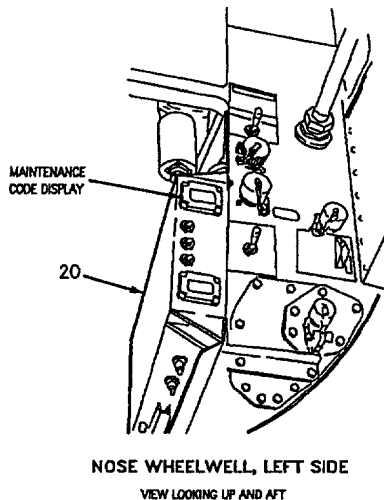
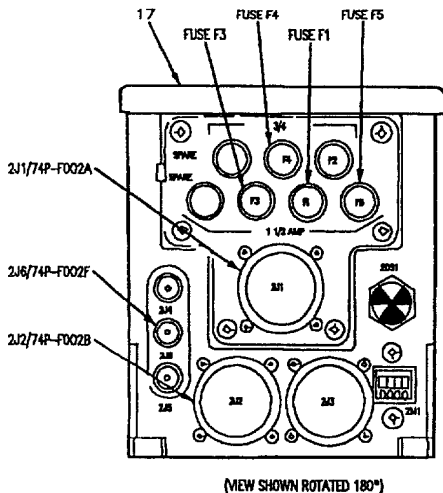
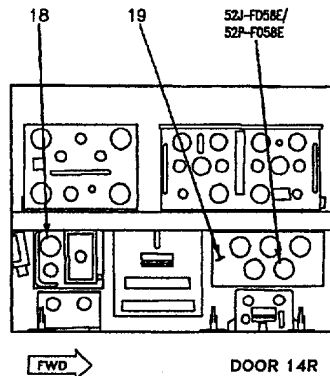
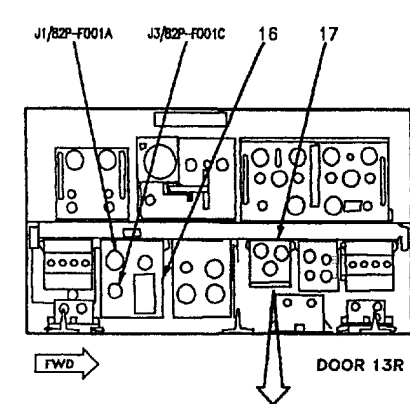
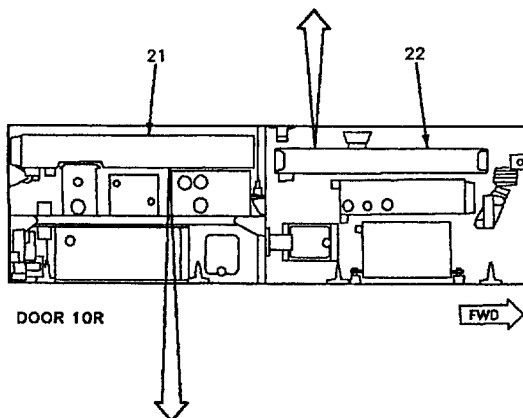


Figure 1. Instrument Landing System Locator (Sheet 6)

52A-D024		NO. 2 CIRCUIT BREAKER PANEL ASSEMBLY		
ZONE	REF DES	NOMENCLATURE		BUS
2 A9	33CB0003	STBY ATT IND		R 115VAC ØA
3 A11	82CB0002	CSC		R 115VAC ØA
3 A15	33CB0003	STBY ATT IND		R 115VAC ØA
2 B9	33CB0004	STBY ATT IND		R 115VAC ØB
3 B11	82CB0003	CSC		R 115VAC ØB
3 B15	33CB0004	STBY ATT IND		R 115VAC ØB
2 C9	33CB0005	STBY ATT IND		R 115VAC ØC
3 C11	82CB0004	CSC		R 115VAC ØC
3 C15	33CB0005	STBY ATT IND		R 115VAC ØC
2 D16	76CB0025	INTERCOM		R 28VDC



52A-D026		NO. 4 CIRCUIT BREAKER PANEL ASSEMBLY		
ZONE	REF DES	NOMENCLATURE		BUS
3 B3	82CB0005	CSC		R 28VDC
2 B12	82CB0005	CSC		R 28VDC
3 C2	76CB0025	INTERCOM		R 28VDC
2 C7	82CB0004	CSC		R 115VAC ØC
2 C8	82CB0003	CSC		R 115VAC ØB
2 C9	82CB0002	CSC		R 115VAC ØA

Figure 1. Instrument Landing System Locator (Sheet 7)

NOMENCLATURE	INDEX NO.	REF DES
ATTITUDE REFERENCE INDICATOR	4	33A-J015
CONTROL-INDICATOR	18	82A-F001
DIGITAL DATA COMPUTER No. 1	13	82A-E001
DIGITAL DISPLAY INDICATOR ID-2150/ASM-612	20	85A-G003
ELECTRONIC EQUIPMENT CONTROL	2	79A-J006
GND PWR CONTROL PANEL ASSEMBLY	1	1A-H004
HEAD-UP DISPLAY	6	79A-J001
HORIZONTAL INDICATOR	7	80A-J003
INTERCOMMUNICATION AMPLIFIER-CONTROL	8	76A-H009
KU-BAND ANTENNA	11	74E-A011
KU-BAND WAVEGUIDE ASSEMBLY	12	74W-B501
LEFT DIGITAL DISPLAY	5	80A-H001
NO. 2 CIRCUIT BREAKER PANEL ASSEMBLY	22	52A-D024
NO. 2 RELAY PANEL ASSEMBLY	19	62A-F058
NO. 4 CIRCUIT BREAKER PANEL ASSEMBLY	21	52A-D026
NO. 7 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	15	52A-C051
NO. 8 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	14	52A-C159
NOSE WHEELWELL DIGITAL DISPLAY INDICATOR	20	85A-G003
PULSE DECODER KY-651()/ARA-63	17	74A-F002
RADIO RECEIVER R-1379()/AFA-63	10	74REB001
REAR ELECTRONIC EQUIPMENT CONTROL	9	76A-L028
RIGHT DIGITAL DISPLAY INDICATOR	3	80A-002
SIGNAL DATA COMPUTER	16	85A-F042

LEGEND

1. AIRCRAFT CONNECTOR LOCATIONS ARE SHOWN IN A1-F18A()-WDM-000.

2 161353 THRU 161359.

3 161360 AND UP.

Figure 1. Instrument Landing System Locator (Sheet 8)

ORGANIZATIONAL MAINTENANCE

SYSTEM SCHEMATICS

SCHEMATIC - FUNCTIONAL SCHEMATIC

INSTRUMENT LANDING SYSTEM

Reference Material

None

Alphabetical Index

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Record of Applicable Technical Directives

None

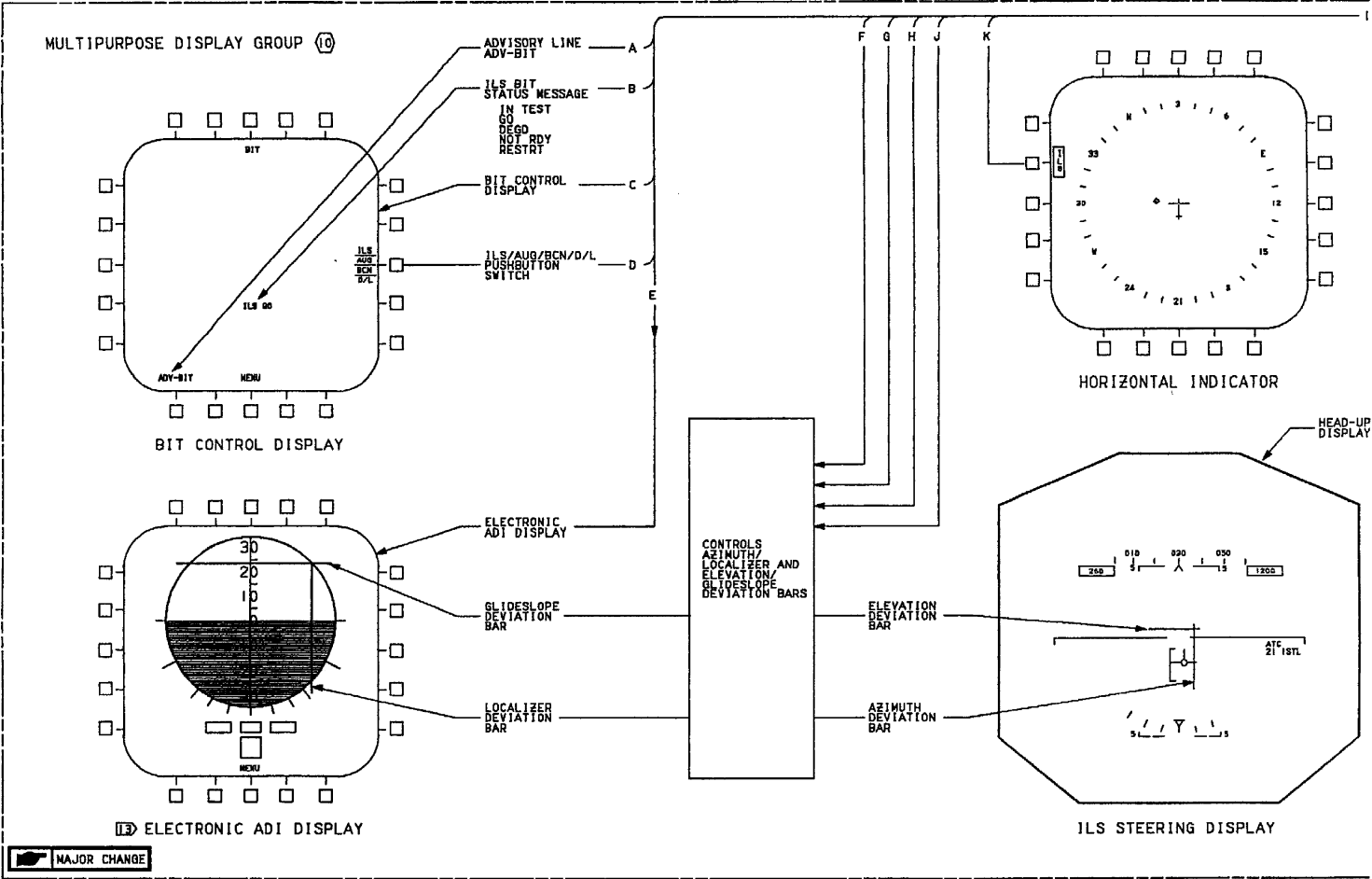


Figure 1.

Figure 1. Instrument Landing System Functional Schematic (Sheet 1)

Figure 1.

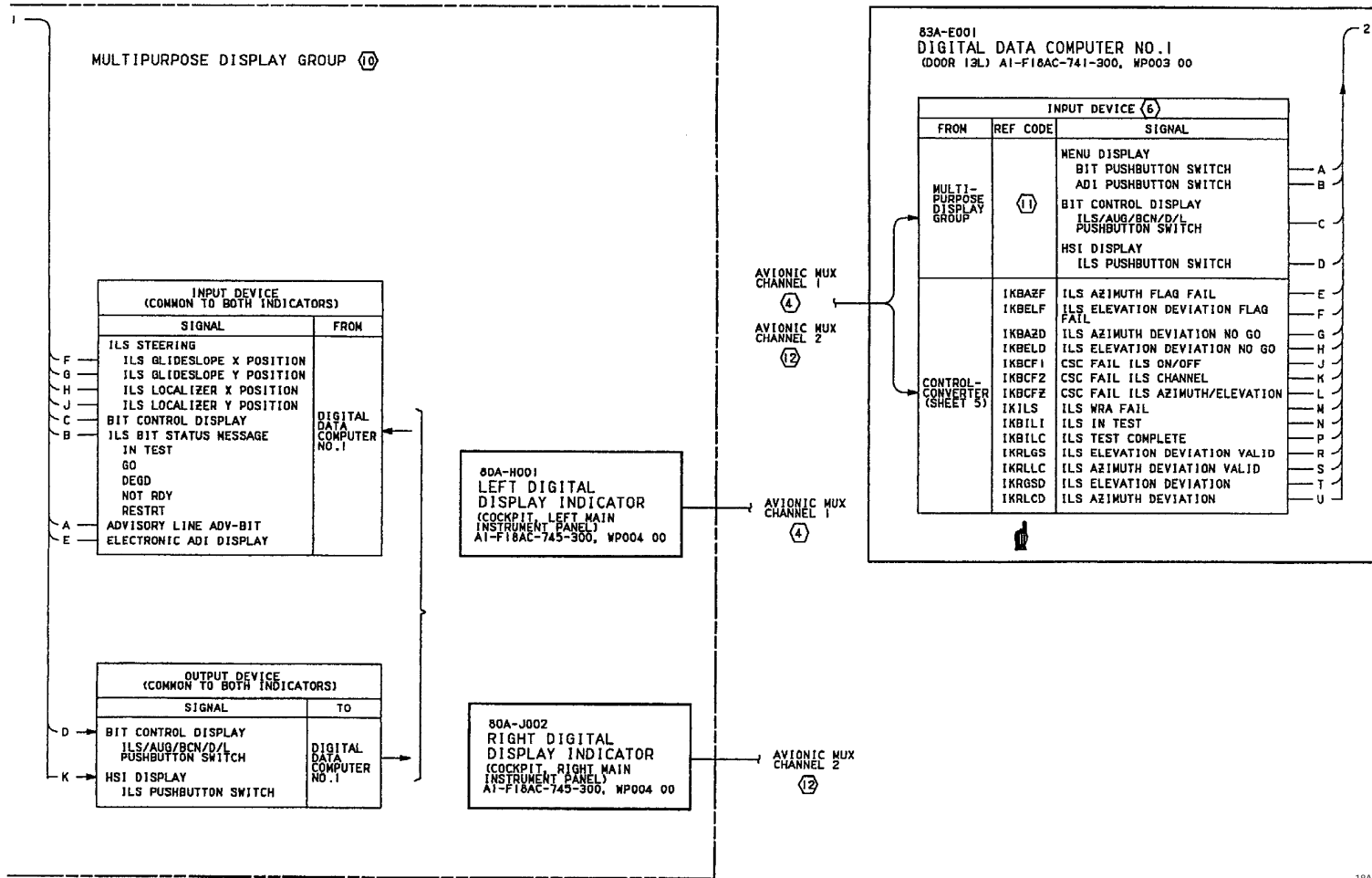


Figure 1.

Figure 1. Instrument Landing System Functional Schematic (Sheet 2)

Figure 1.

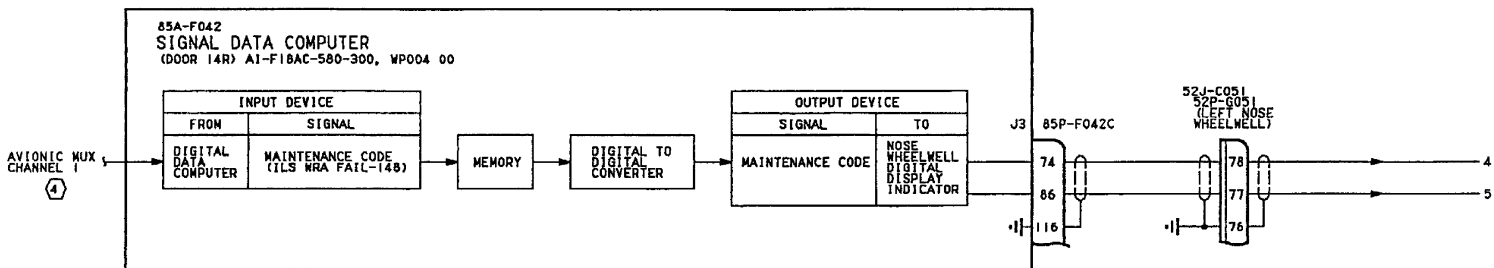
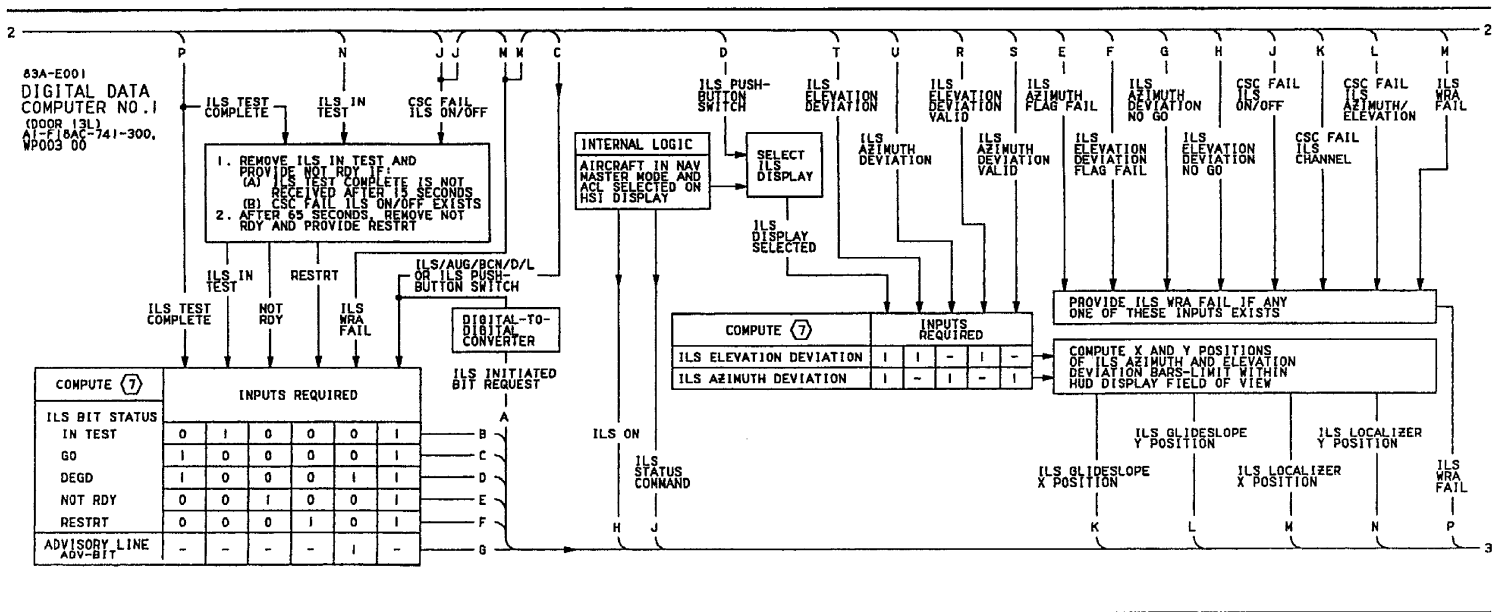


Figure 1.

Figure 1. Instrument Landing System Functional Schematic (Sheet 3)

Figure 1.

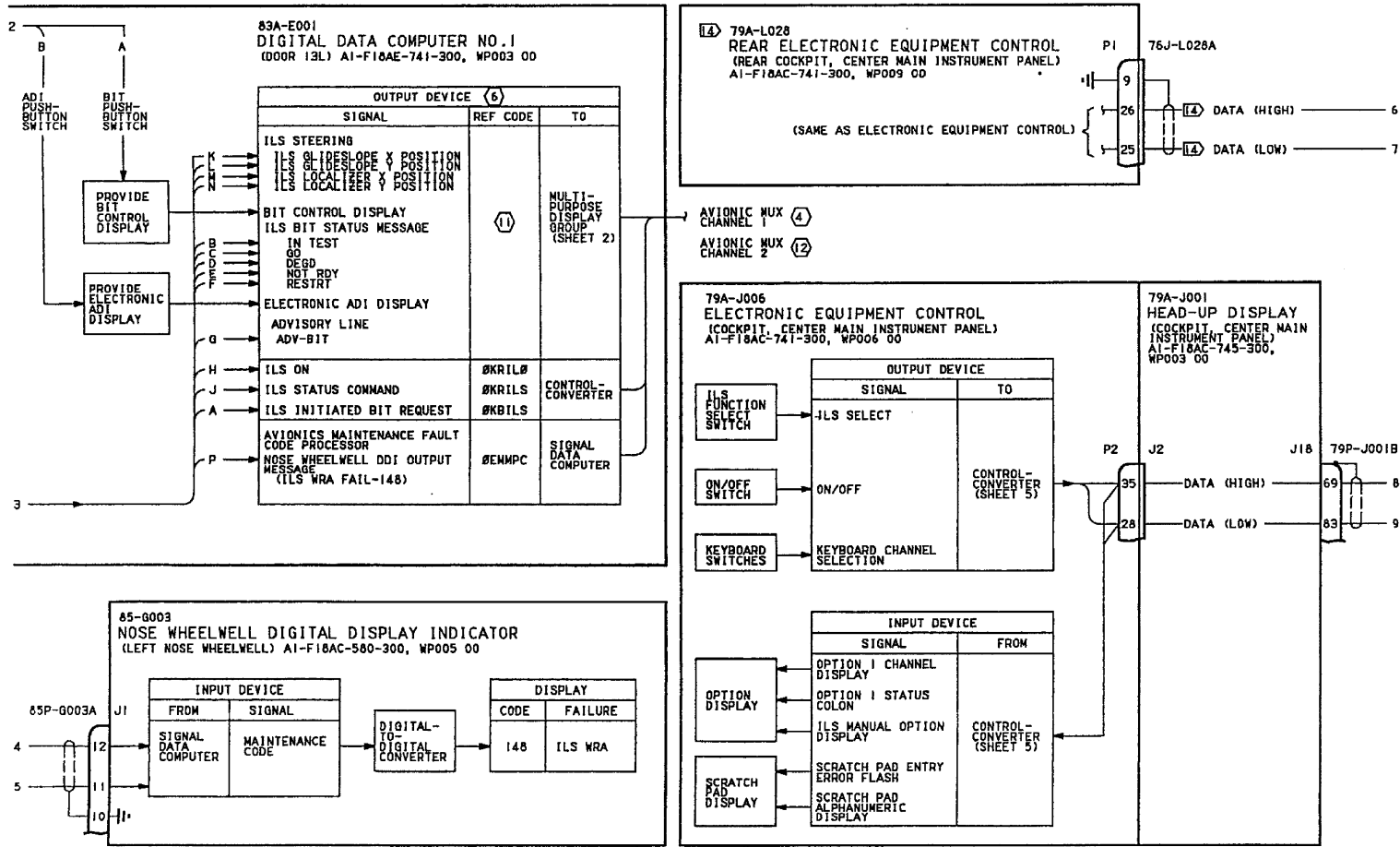


Figure 1.

Figure 1. Instrument Landing System Functional Schematic (Sheet 4)

Figure 1.

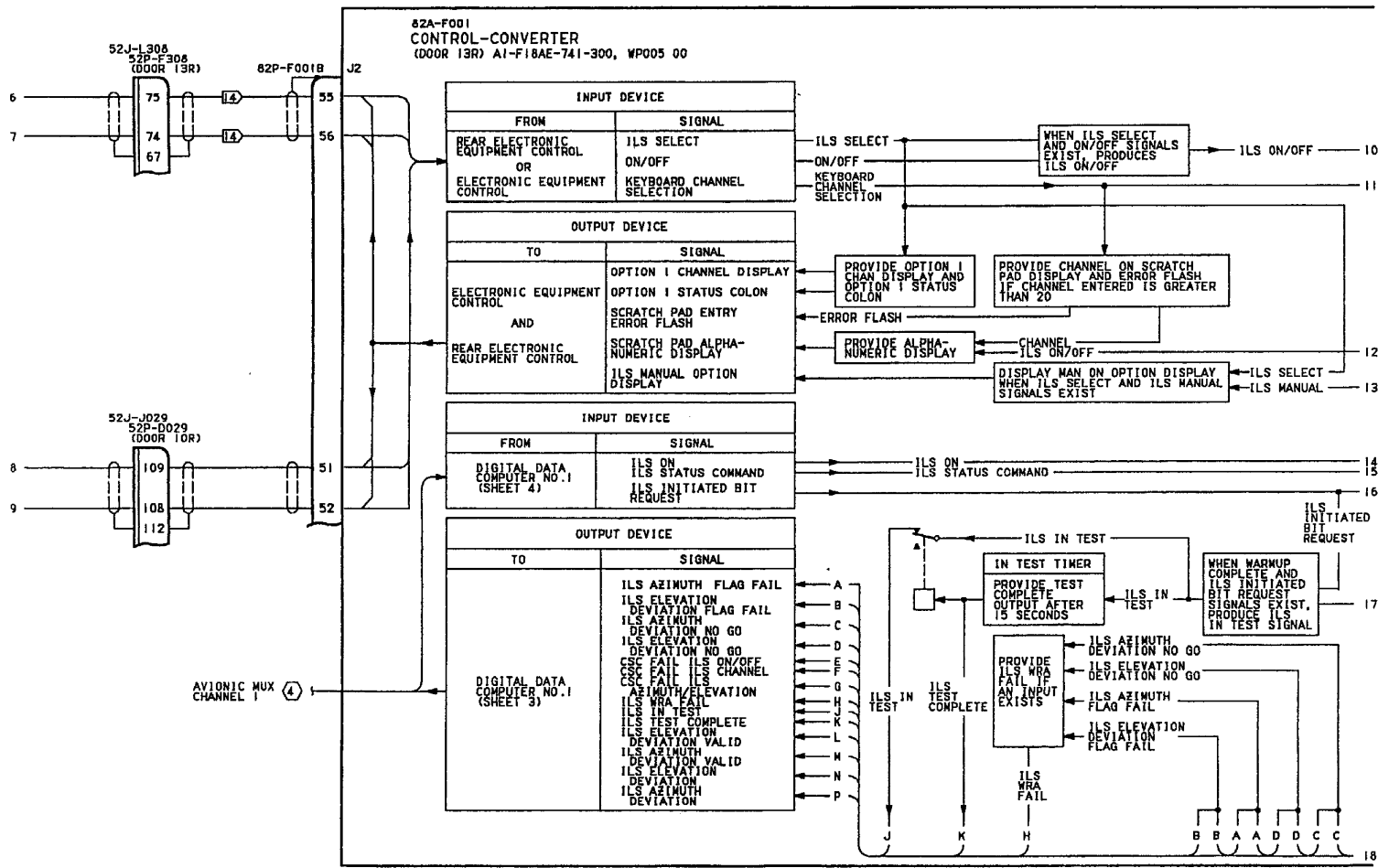


Figure 1.

Figure 1. Instrument Landing System Functional Schematic (Sheet 5)

Figure 1.

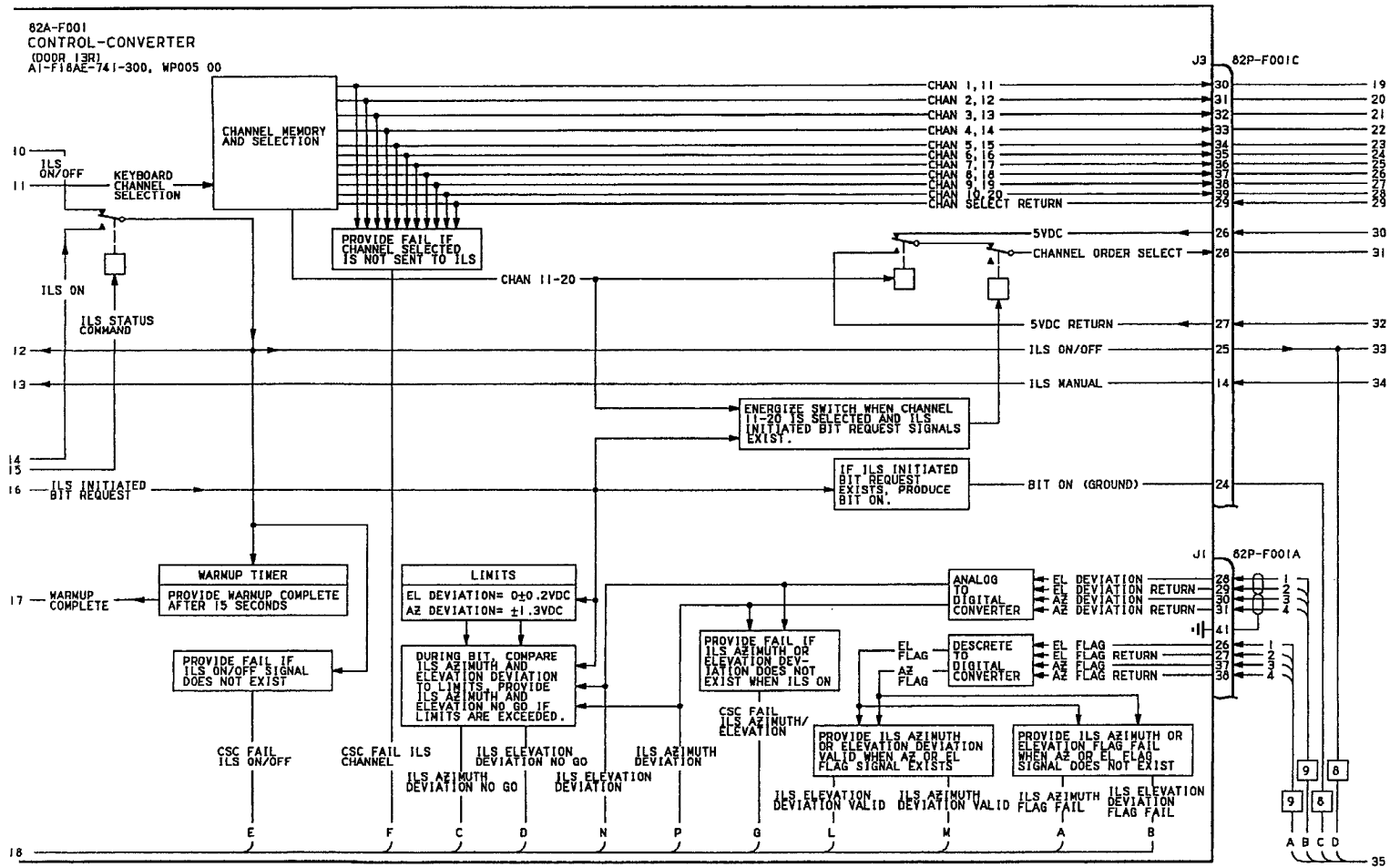
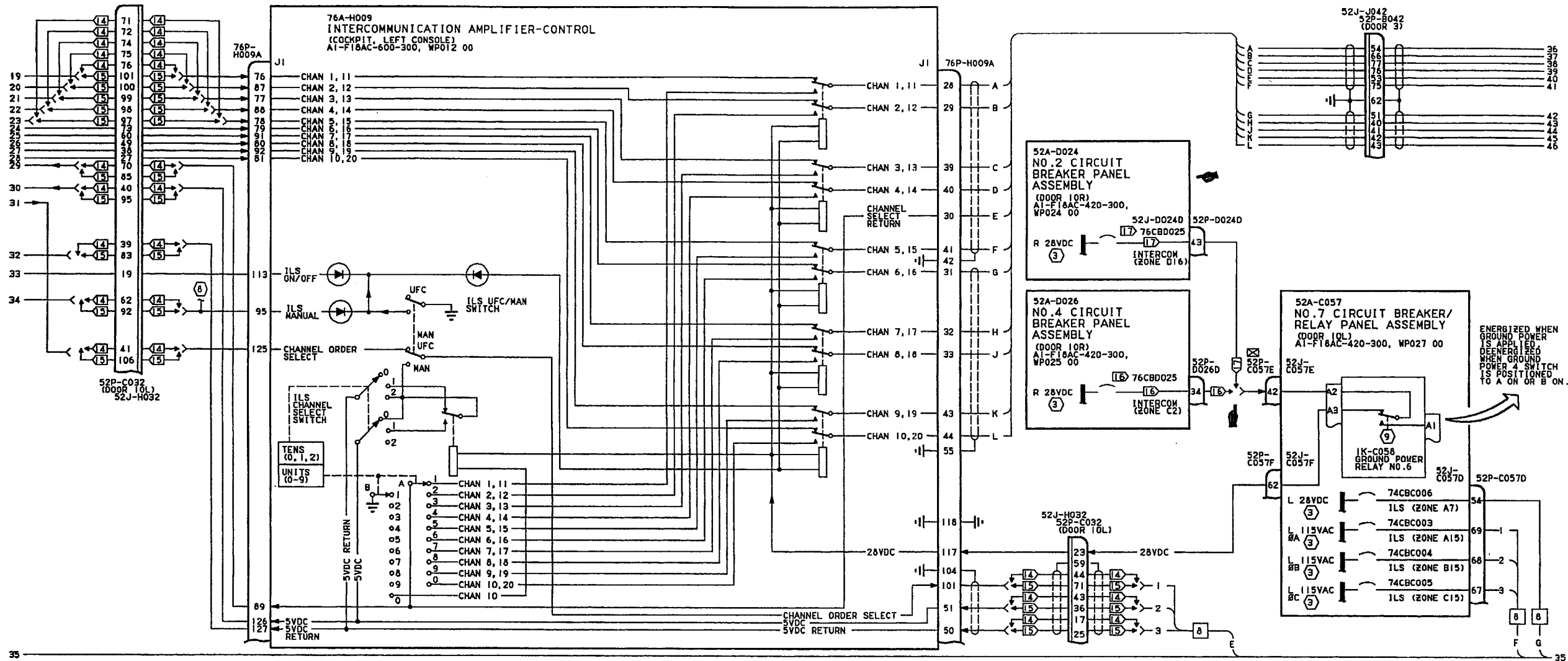


Figure 1.

Figure 1.



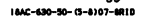


Figure 1.

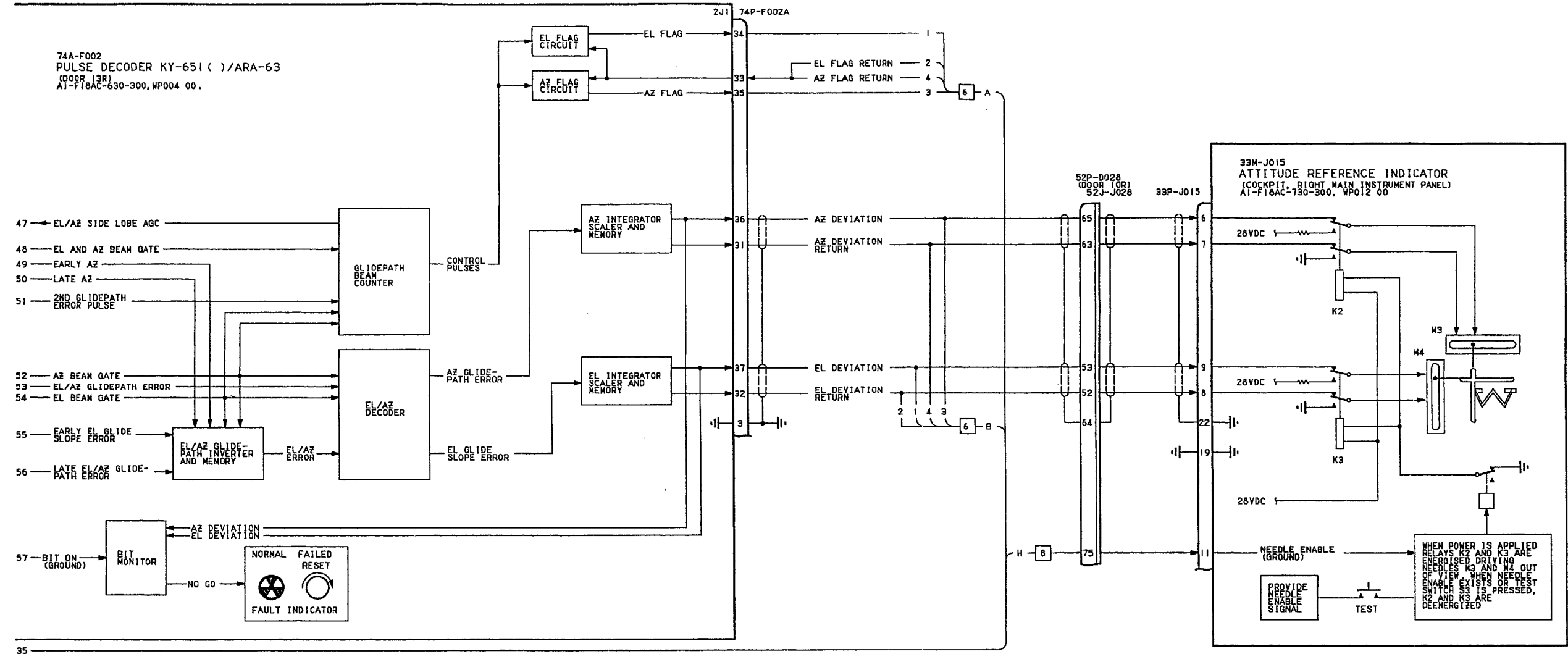
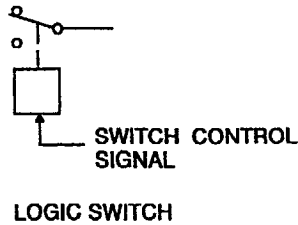


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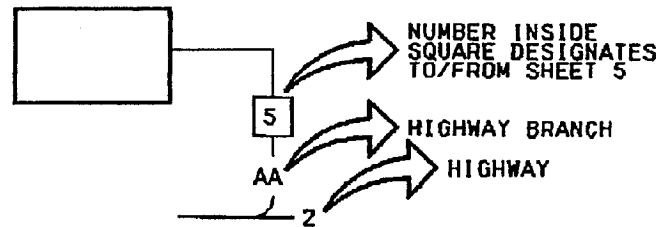
Figure 1. Instrument Landing System Functional Schematic (Sheet 9)

Figure 1.

1. FOR NONSTANDARD SYMBOLS AND ABBREVIATIONS,



HIGHWAY EXAMPLE



- ⊕ IDENTIFIES RELAY USED TO SWITCH LOW LEVEL CURRENT. SEE NOTE 2.
- ☒ IDENTIFIES 24VDC BATTERY VOLTAGE EXISTS ON SOME PINS OF CONNECTOR. SEE NOTE 2.

2. CONTINUITY TESTS:

- A. ALL AIRCRAFT WIRE NUMBERS, SPLICE POINTS, AND GROUND POINTS ARE SHOWN IN A1-F18A()-WDM-000.
- B. WHEN A LOW LEVEL CURRENT SWITCHING RELAY (IDENTIFIED BY ⊕) IS REMOVED FOR TROUBLESHOOTING, IDENTIFY RELAY AND SOCKET FOR CORRECT REINSTALLATION. DO NOT REPLACE LOW LEVEL CURRENT SWITCHING RELAY WITH ANY OTHER USED RELAY. IF RELAY IS DEFECTIVE, REPLACE WITH NEW RELAY.
- C. DO NOT TEST LOW LEVEL DEVICES (SWITCHES/RELAY CONTACTS) FOR CONTINUITY WITH MULTIMETER ON RX1 SCALE. PIN TO PIN TESTS THAT DO NOT GO THROUGH SWITCHES/RELAY CONTACTS MAY USE THE RX1 SCALE.
- D. WHEN TESTING CONTINUITY, TEST FOR:
- (1) SHORTS TO GROUND.
 - (2) SHORTS BETWEEN SURROUNDING PINS ON CONNECTORS.
 - (3) SHORTS BETWEEN SHIELD AND CONDUCTORS.
 - (4) SHIELD CONTINUITY.
- E. WHEN ELECTRICAL POWER IS OFF, 24VDC BATTERY VOLTAGE EXISTS ON SOME PINS ON CONNECTORS (IDENTIFIED BY ☒). MAKE SURE

LEGEND

MULTIMETER LEADS/JUMPER WIRES ARE INSTALLED ON CORRECT PINS WHEN TESTING FOR CONTINUITY.

- ③ POWER DISTRIBUTION SCHEMATIC, A1-F18AC-420-500, WP005 00.
- ④ AVIONIC MUX CHANNEL 1 SCHEMATIC, A1-F18AC-741-500, WP004 00.
- ⑤ DELETED
- ⑥ FOR LOGIC DIAGRAMS RELATING TO REF CODE, REFER TO A1-F18A()-OLD-000. FOR MEMORY INSPECT ACCESS LOCATION RELATING TO REF CODE, REFER TO A1-F18AC-FIM-100.
- ⑦ EXPLANATION OF MATRIX:
- A. COMPUTER COLUMN LISTS THE SIGNAL OUTPUT.
 - B. INPUTS REQUIRED ARE USED TO DEVELOP THE SIGNAL OUTPUT.
 - C. THE SIGNAL OUTPUT IS READ HORIZONTALLY. EACH HORIZONTAL LINE IS AN INDEPENDENT SIGNAL OUTPUT.
 - D. INTERPRET MATRIX TABLE AS INDICATED.
 - (1) ONE (1) INDICATES THIS INPUT AS NAMED MUST BE THERE TO GET THE OUTPUT.
 - (2) ZERO (0) INDICATES THIS INPUT AS NAMED MUST NOT BE THERE TO GET THE OUTPUT.
 - (3) DASH (-) INDICATES THE OUTPUT DOES NOT DEPEND ON THIS INPUT.
- ⑧ DATA LINK SYSTEM MESSAGE RECEIVING, TRANSMITTING, AND MODE CONTROL FUNCTIONAL SCHEMATIC, A1-F18AC-630-510(C), WP010 00.
- ⑨ GROUND POWER SWITCHING SCHEMATIC, A1-F18AC-420-500, WP005 00.
- ⑩ MULTIPURPOSE DISPLAY GROUP INTERCONNECT SCHEMATIC, A1-F18AC-745-500, WP004 00.
- ⑪ DISPLAY REF CODES ARE NOT SHOWN. IF DISPLAY MALFUNCTION EXISTS TRANSFER DISPLAY TO ANOTHER INDICATOR. IF MALFUNCTION EXISTS ON MORE THAN ONE INDICATOR, TROUBLESHOOT USING A1-F18A()-OLD-000 INPUT REF CODES. IF MALFUNCTION EXISTS ONLY ON ONE INDICATOR, TROUBLESHOOT BY DOING DISPLAY TEST, A1-F18AC-745-200, WP004 00 (F/A-18A) OR WP005 00 (F/A-18B).
- ⑫ AVIONIC MUX CHANNEL 2 SCHEMATIC, A1-F18AC-741-500, WP005 00.
- 13 F/A-18B.
- 14 F/A-18A.
- 15 161360 AND UP.
- 16 161353 THRU 161359.
- 17

Figure 1.

Figure 1. Instrument Landing System Functional Schematic (Sheet 10)

Figure 1.

ORGANIZATIONAL MAINTENANCE

SYSTEM SCHEMATICS

LOCATOR

RADAR BEACON SYSTEM

Reference Material

None

Alphabetical Index

Subject	Page No.
Radar Beacon System Locator, Figure 1	2

Record of Applicable Technical Directives

None

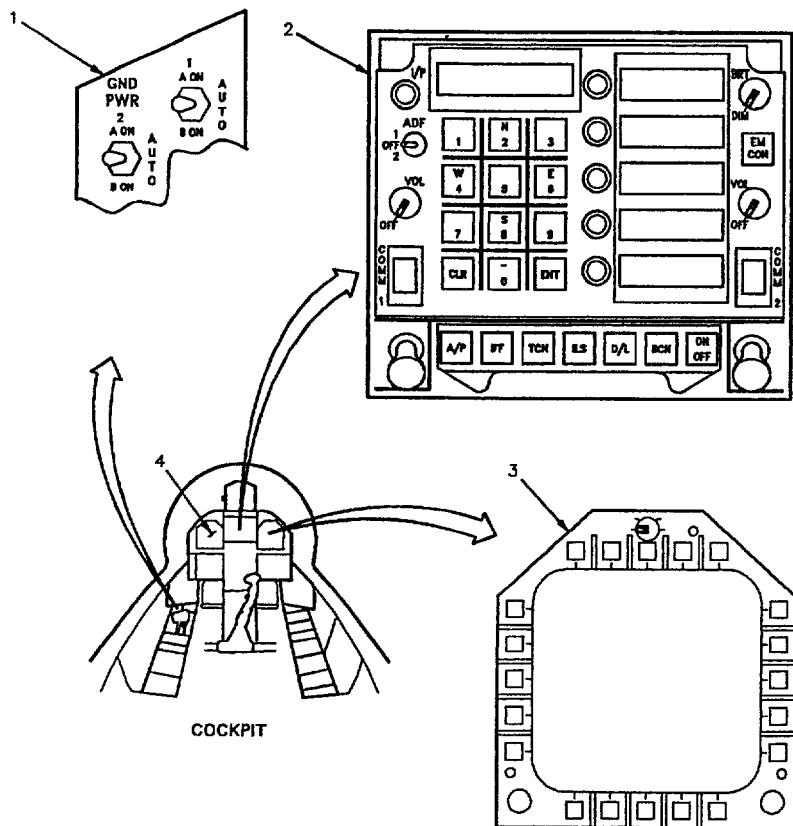
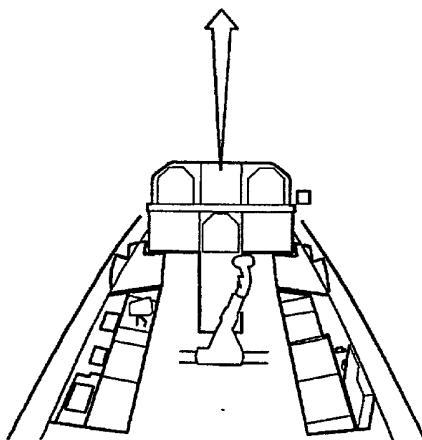
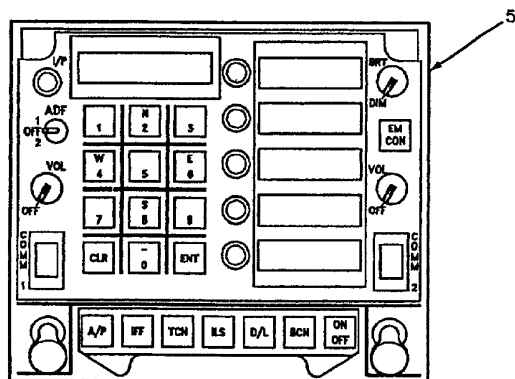
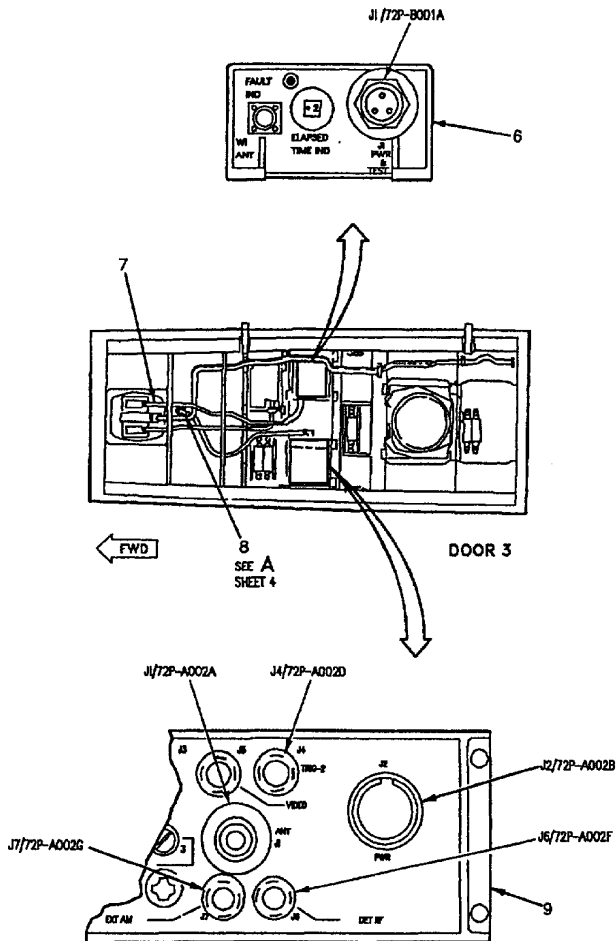


Figure 1. Radar Beacon System Locator (Sheet 1)



REAR COCKPIT

Figure 1. Radar Beacon System Locator (Sheet 2)



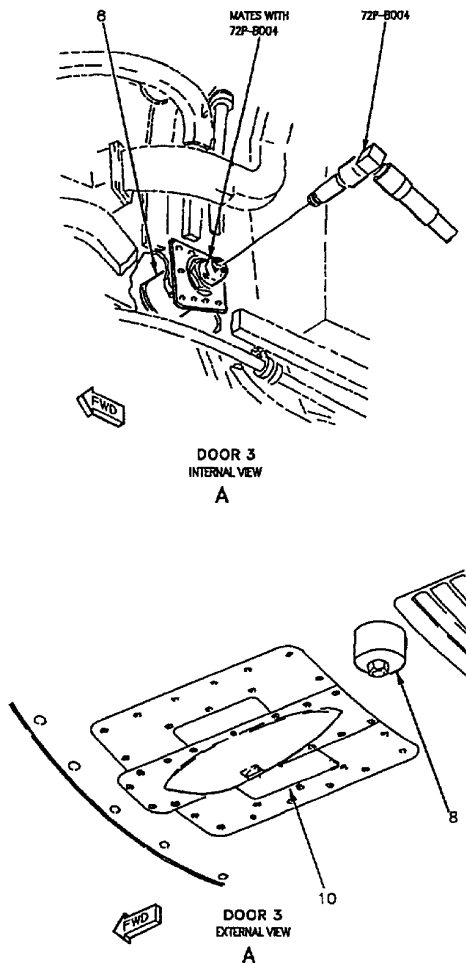
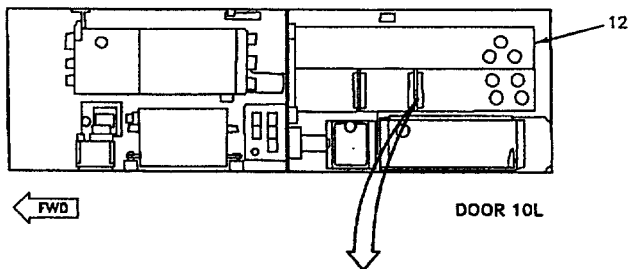
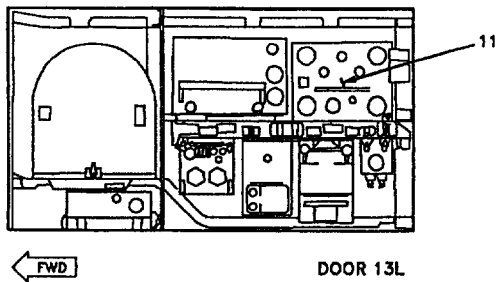


Figure 1. Radar Beacon System Locator (Sheet 4)



52A-C057 NO. 7 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY			
ZONE	REF DES	NOMENCLATURE	PURPOSE
A20	83CBC006	MISSION COMP NO. 1	L 115VAC ØA
B20	83CBC007	MISSION COMP NO. 1	L 115VAC ØB
C20	83CBC008	MISSION COMP NO. 1	L 115VAC ØC

Figure 1. Radar Beacon System Locator (Sheet 5)

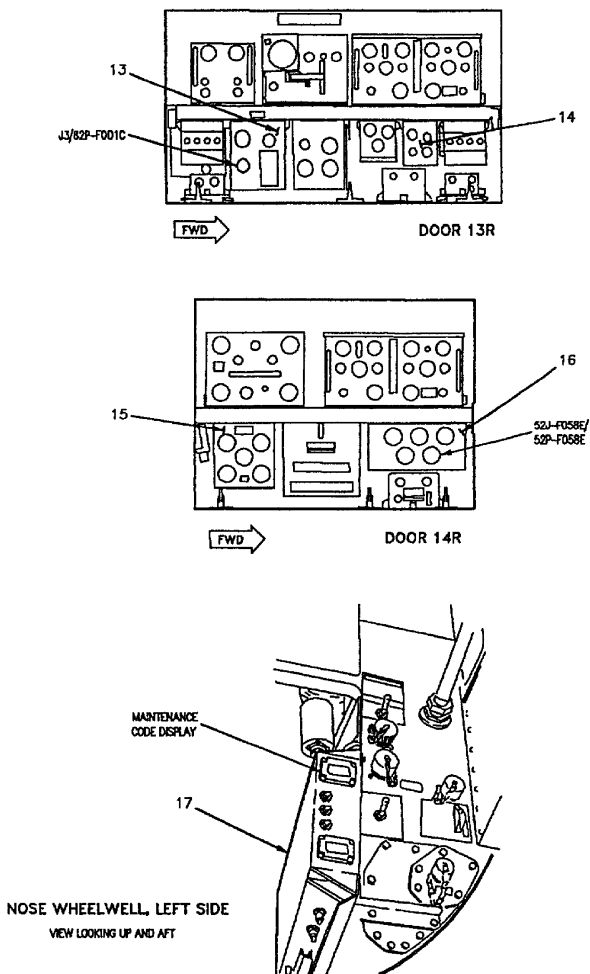
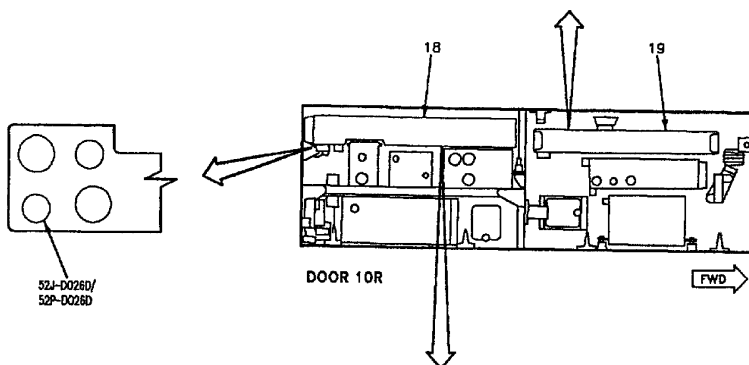


Figure 1. Radar Beacon System Locator (Sheet 6)

52A-D024		NO. 2 CIRCUIT BREAKER PANEL ASSEMBLY	
ZONE	REF DES	NOMENCLATURE	BUS
2 A11	80CB0007	MFD	R 115VAC ØA
1 A11	82CB0002	CSC	R 115VAC ØA
1 A12	83CB0009	MISSION CMPTTR NO. 2	R 115VAC ØA
3 A17	80CB0007	MFD	R 115VAC ØA
3 A18	83CB0009	MISSION CMPTTR NO. 2	R 115VAC ØA
3 B11	82CB0003	CSC	R 115VAC ØB
2 B11	80CB0006	MFD	R 115VAC ØB
2 B12	83CB0010	MISSION CMPTTR NO. 2	R 115VAC ØB
3 B17	80CB0008	MFD	R 115VAC ØB
3 B18	83CB0010	MISSION CMPTTR NO. 2	R 115VAC ØB
2 C11	80CB0009	MFD	R 115VAC ØC
3 C11	82CB0009	CSC	R 115VAC ØC
2 C12	83CB0011	MISSION CMPTTR NO. 2	R 115VAC ØC
3 D7	80CB0009	MFD	R 115VAC ØC
3 D8	83CB0011	MISSION CMPTTR NO. 2	R 115VAC ØC



52A-D026		NO. 4 CIRCUIT BREAKER PANEL ASSEMBLY	
ZONE	REF DES	NOMENCLATURE	BUS
3 B3	82CB0005	CSC	R 28VDC
2 B12	82CB0005	CSC	R 28VDC
3 C1	72CB0007	BEACON R/T AUG	R 28VDC
2 C7	82CB0004	CSC	R 28VDC
2 D8	82CB0003	CSC	R 115VAC ØC
2 D9	82CB0002	CSC	R 115VAC ØB
2 C14	72CB0007	BEACON R/T AUG	R 28VDC

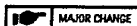


Figure 1. Radar Beacon System Locator (Sheet 7)

NOMENCLATURE	INDEX NO.	REF DES
CONTROL-INDICATOR	13	82A-F001
DIGITAL DATA COMPUTER NO. 1	11	82A-E001
ELECTRONIC EQUIPMENT CONTROL	2	79A-J006
GND PWR CONTROL PANEL ASSEMBLY	1	1A-H004
INTERFERENCE BLANKER	14	66A-F001
KA-BAND ANTENNA	10	72E-B003
KA-BAND COAX CABLE/WAVEGUIDE ASSEMBLY	7	72W-B501
LEFT DIGITAL DISPLAY INDICATOR	4	80A-H001
NO. 2 CIRCUIT BREAKER PANEL ASSEMBLY	19	52A-D024
NO. 2 RELAY PANEL ASSEMBLY	16	52A-F058
NO. 4 CIRCUIT BREAKER PANEL ASSEMBLY	18	52A-D026
NO. 7 CIRCUIT BREAKER/RELAY PANEL ASSEMBLY	12	52A-C057
NOSE WHEELWELL DIGITAL DISPLAY INDICATOR	17	85A-B003
RADAR RECEIVER	6	72REB001
RADAR RECEIVER-TRANSMITTER RT-1028/APN-202	9	72A-A002
REAR ELECTRONIC EQUIPMENT CONTROL	5	76A-L028
RIGHT DIGITAL DISPLAY INDICATOR	3	80A-J002
SIGNAL DATA RECORDER RO-508/ASM-612	15	85A-F001
X BAND ANTENNA	8	72E-B004

LEGEND

1. AIRCRAFT CONNECTOR LOCATIONS ARE SHOWN IN A1-F18A()-WDM-000.

2 161353 THRU 161359.

3 161360 AND UP.

Figure 1. Radar Beacon System Locator (Sheet 8)

ORGANIZATIONAL MAINTENANCE

SYSTEM SCHEMATICS

SCHEMATIC-FUNCTIONAL SCHEMATIC

RADAR BEACON SYSTEM

Reference Material

None

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Record of Applicable Technical Directives

None

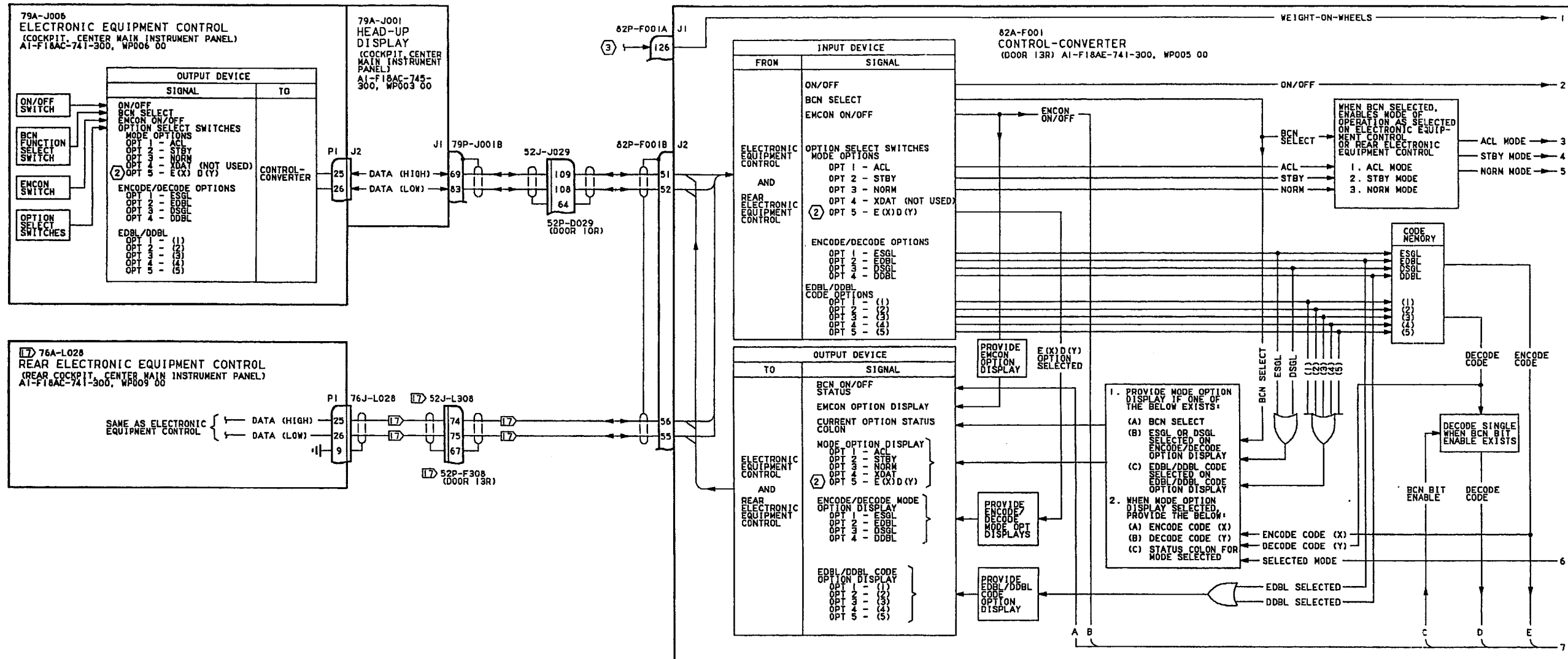


Figure 1. Radar Beacon Functional Schematic (Sheet 1)

Figure 1.

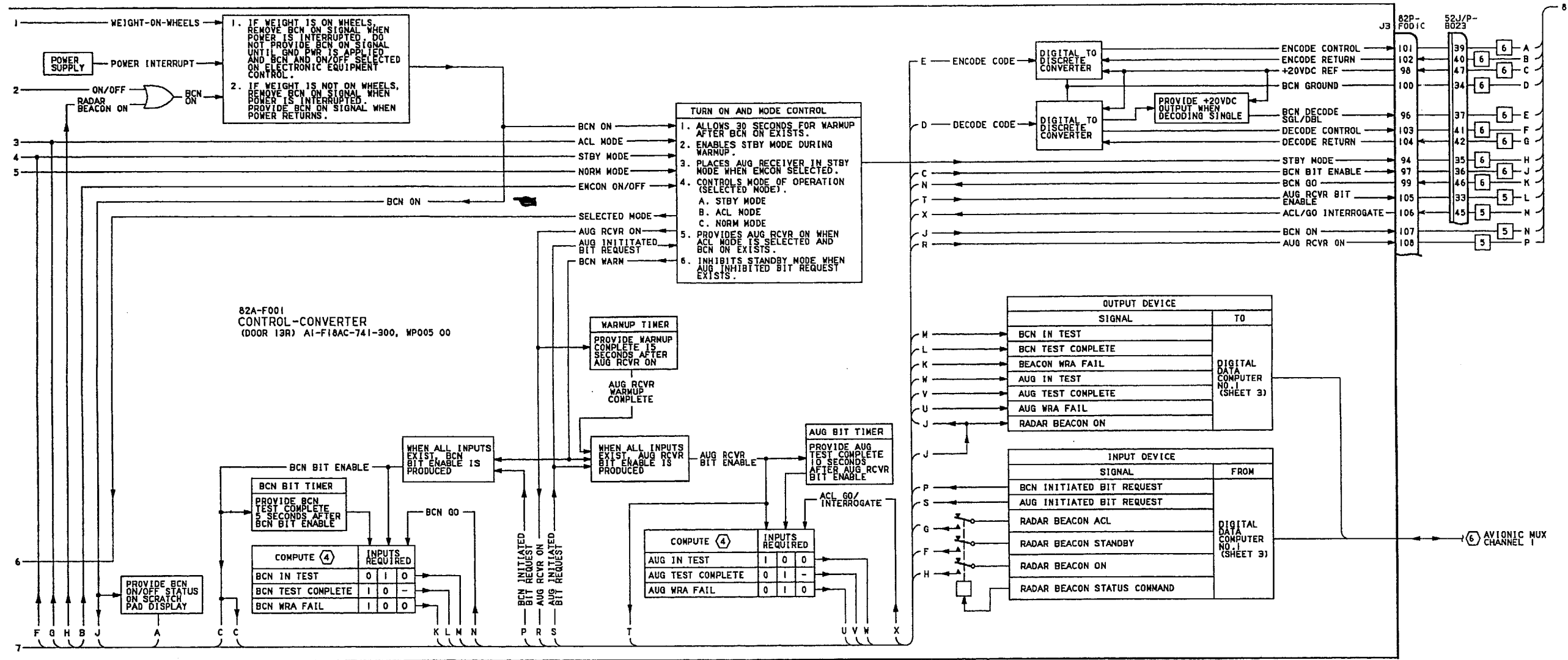


Figure 1.

Figure 1. Radar Beacon Functional Schematic (Sheet 2)

Figure 1.

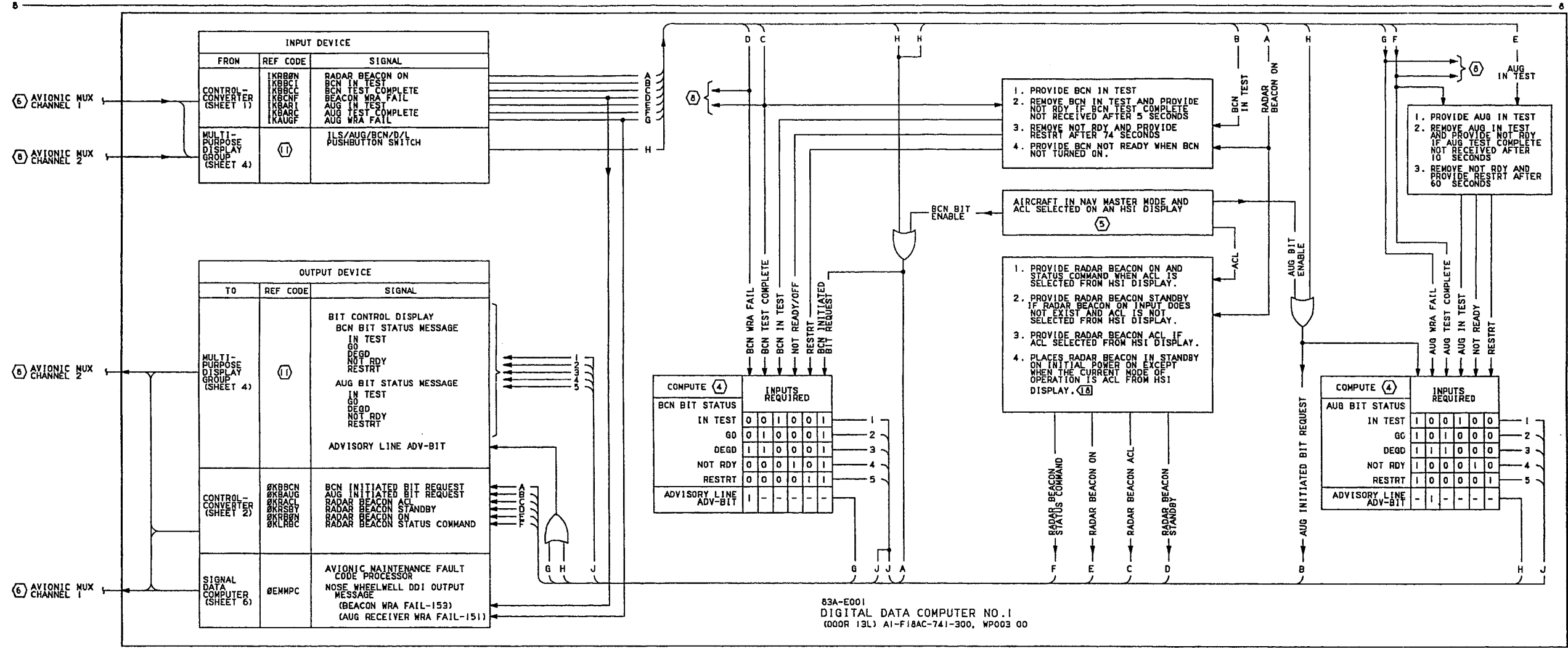


Figure 1.

Figure 1. Radar Beacon Functional Schematic (Sheet 3)

Figure 1.

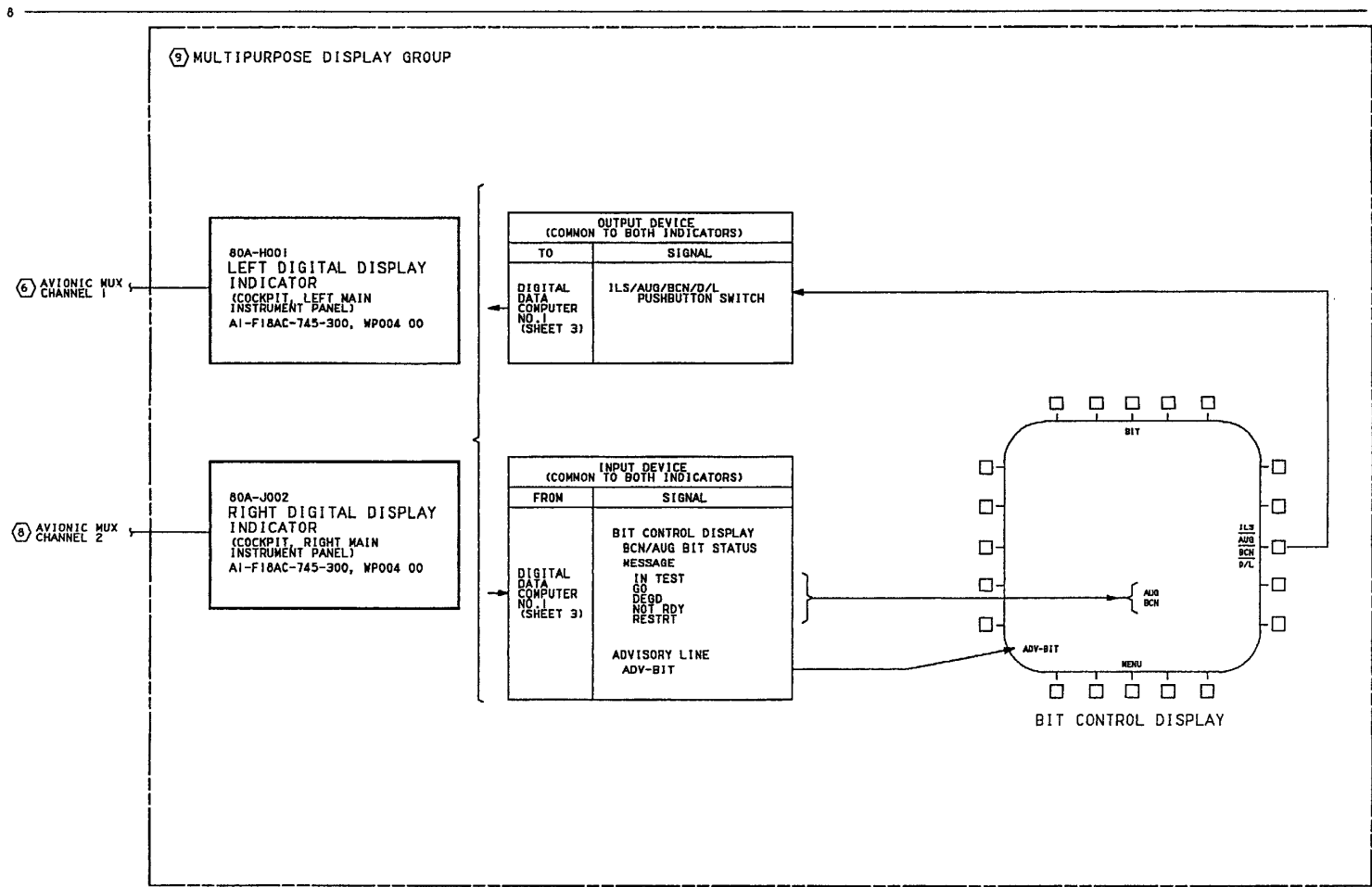
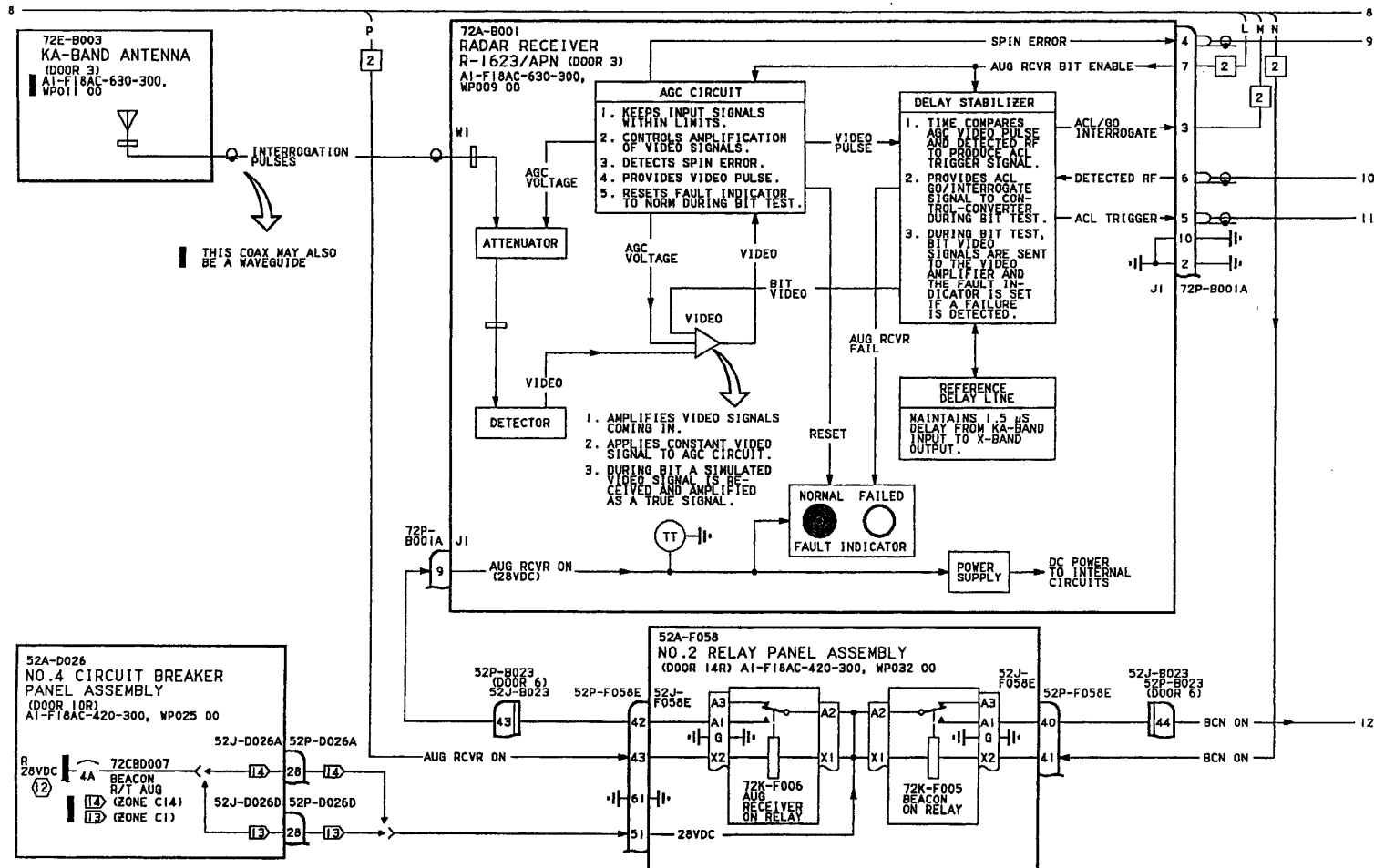


Figure 1.

Figure 1. Radar Beacon Functional Schematic (Sheet 4)

Figure 1.



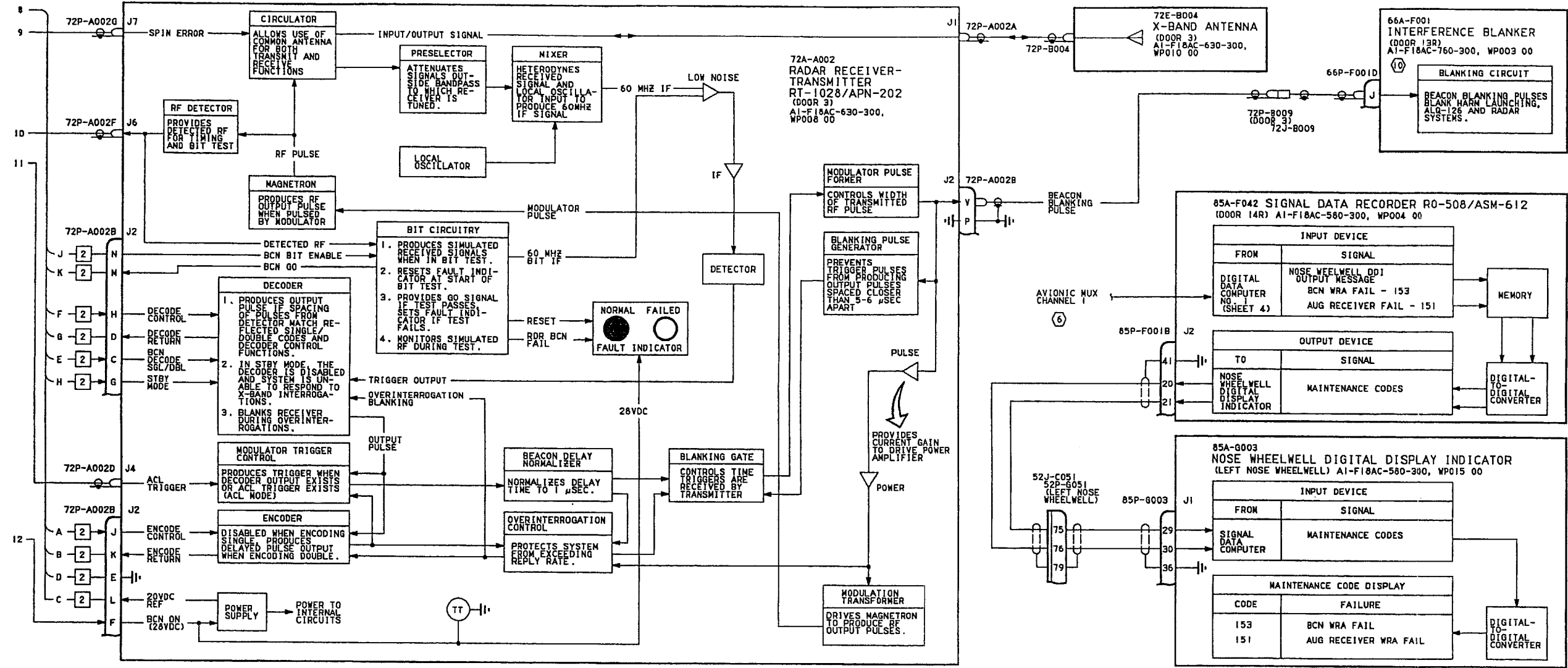


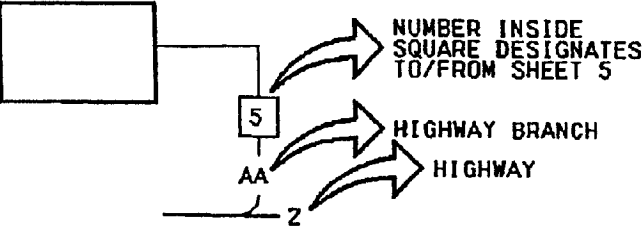
Figure 1.

Figure 1. Radar Beacon Functional Schematic (Sheet 6)

Figure 1.

1. FOR NONSTANDARD SYMBOLS AND ABBREVIATIONS,

HIGHWAY EXAMPLE



⊕ IDENTIFIES RELAY USED TO SWITCH LOW LEVEL CURRENT. SEE NOTE 2.

2. CONTINUITY TESTS:

- A. ALL AIRCRAFT WIRE NUMBERS, SPLICE POINTS, AND GROUND POINTS ARE SHOWN IN A1-F18A()-WDM-000.
- B. WHEN A LOW LEVEL CURRENT SWITCHING RELAY (IDENTIFIED BY ⊕) IS REMOVED FOR TROUBLESHOOTING, IDENTIFY RELAY AND SOCKET FOR CORRECT REINSTALLATION. DO NOT REPLACE LOW LEVEL CURRENT SWITCHING RELAY WITH ANY OTHER USED RELAY. IF RELAY IS DEFECTIVE, REPLACE WITH NEW RELAY.
- C. DO NOT TEST LOW LEVEL DEVICES (SWITCHES/RELAY CONTACTS) FOR CONTINUITY WITH MULTIMETER ON RX1 SCALE. PIN TO PIN TESTS THAT DO NOT GO THROUGH SWITCHES/RELAY CONTACTS MAY USE THE RX1 SCALE.
- D. WHEN TESTING CONTINUITY, TEST FOR:
 - (1) SHORTS TO GROUND.
 - (2) SHORTS BETWEEN SURROUNDING PINS ON CONNECTORS.
 - (3) SHORTS BETWEEN SHIELD AND CONDUCTORS.
 - (4) SHIELD CONTINUITY.

③ CONTROL-CONVERTER AND ELECTRONIC EQUIPMENT CONTROL INTERCONNECT SCHEMATIC, A1-F18AC-741-500, WP007 00.

④ EXPLANATION OF MATRIX:

- A. COMPUTE COLUMN LISTS THE SIGNAL OUTPUT.
- B. INPUTS REQUIRED ARE USED TO DEVELOP THE SIGNAL OUTPUT.
- C. THE SIGNAL OUTPUT IS READ HORIZONTALLY. EACH HORIZONTAL LINE IS AN INDEPENDENT SIGNAL OUTPUT.

LEGEND

D. INTERPRET MATRIX TABLE AS INDICATED.

- (1) ONE (1) INDICATES THIS INPUT AS NAMED MUST BE THERE TO GET THE OUTPUT.
- (2) ZERO (0) INDICATES THIS INPUT AS NAMED MUST NOT BE THERE TO GET THE OUTPUT.
- (3) DASH (-) INDICATES THE OUTPUT DOES NOT DEPEND ON THIS INPUT.

⑥ DATA LINK SYSTEM MESSAGE RECEIVING TRANSMITTING AND MODE CONTROL FUNCTIONAL SCHEMATIC, A1-F18AC-630-510(C), WP010 00.

⑥ AVIONIC MUX CHANNEL 1 SCHEMATIC, A1-F18AC-741-500, WP004 00.

⑦ (X) INDICATES THE EXISTING ENCODE CODE.
(Y) INDICATES THE EXISTING DECODE CODE.

⑧ AVIONIC MUX CHANNEL 2 SCHEMATIC, A1-F18AC-741-500, WP005 00.

⑨ MULTIPURPOSE DISPLAY GROUP INTERCONNECT SCHEMATIC A1-F18AC-745-500, WP004 00.

⑩ INTERFERENCE BLANKER FUNCTIONAL SCHEMATIC, A1-F18AC-760-500, WP004 00.

⑪ DISPLAY REF CODES ARE NOT SHOWN. IF DISPLAY MALFUNCTION EXISTS, TRANSFER DISPLAY TO ANOTHER INDICATOR. IF MALFUNCTION EXISTS ON MORE THAN ONE INDICATOR, TROUBLESHOOT USING A1-F18A()-OLD-000 INPUT REF CODES. IF MALFUNCTION EXISTS ONLY ON ONE INDICATOR, TROUBLESHOOT BY DOING DISPLAY TEST, A1-F18AC-745-200, WP004 00 (F/A18A) OR WP005 00 (F/A-18B).

⑫ POWER DISTRIBUTION SCHEMATIC, A1-F18AC-420-500, WP005 00.

⑬ 161360 AND UP.

⑭ 161353 THRU 161359.

⑮ 163427 THRU 163782.

⑯ 163985 AND UP.

⑰ F/A-18B.

⑱ DIGITAL DATA COMPUTER CONFIG/IDENT 84A AND UP (A1-F18AC-SCM-000).

Figure 1.

Figure 1. Radar Beacon Functional Schematic (Sheet 7)

Figure 1.